

The  
Graves  
Elevator Co.

New York.  
Boston.  
Detroit.  
Atlanta.

Works—Rochester, N. Y.



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SPECIAL ILLUSTRATED CATALOGUE  
OF  
THE GRAVES ELEVATOR COMPANY,

MANUFACTURERS OF

HYDRAULIC PASSENGER AND FREIGHT . . . . .  
ELECTRIC PASSENGER AND FREIGHT . . . . .  
PATENT STEEL SCREW BELT PASSENGER AND FREIGHT  
PATENT SPUR GEAR FREIGHT, HAND AND SIDEWALK . .

· · · · · ELEVATORS. · · · · ·

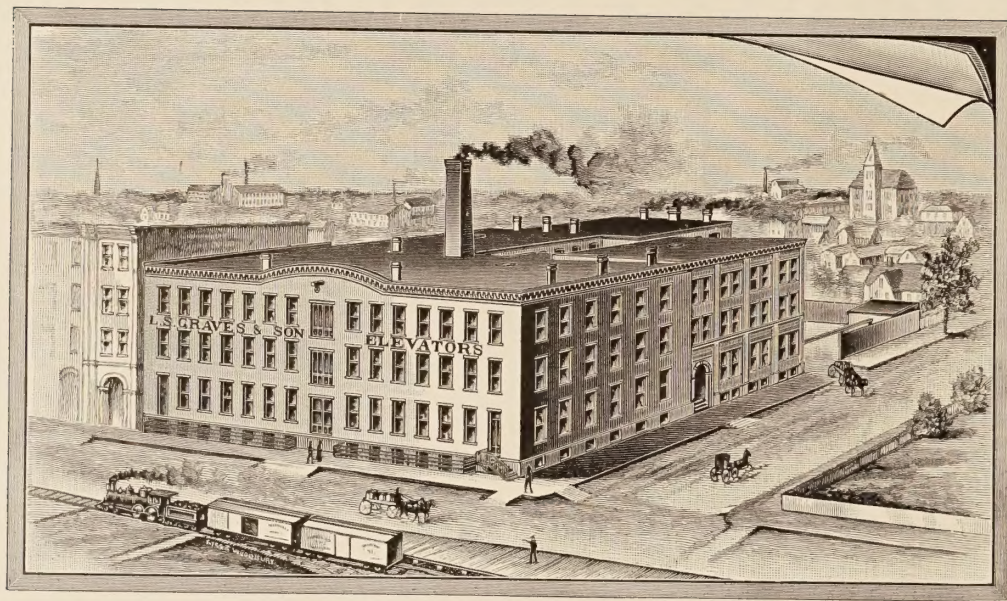
BRANCH OFFICES:

NEW YORK, 92 and 94 Liberty Street, BOSTON, MASS., 53 State Street,  
DETROIT, MICH., Hodges Building. ATLANTA, GA., Inman Building.  
CLEVELAND, OHIO.

MAIN OFFICE AND WORKS:

Center and Frank Streets, = = = = = ROCHESTER, N. Y.





GRAVES' BUILDINGS, COR. FRANK AND CENTER STREETS, ROCHESTER, N. Y.

# INDEX.

Announcement, - - - - -	6	Hydraulic Engine, Double, - - - - -	17
Architects, - - - - -	10	Hydraulic Freight Elevator, - - - - -	18
Automatic Stop Motion, - - - - -	39, 57	Hydraulic Passenger Elevator, - - - - -	20, 22, 24, 26
Care of Freight Elevators, - - - - -	65	Hydraulic Information, - - - - -	15
Convenience and Economy of the Horizontal Engine, - - - - -	19	Iron Frame for Geared Machines, - - - - -	59
Direct Pumping System, - - - - -	24	Operating Factory Elevators, Etc., - - - - -	71
Direct Acting Hydraulic, - - - - -	29	Passenger Elevator run by Belts, - - - - -	44
Elevator, Passenger, - - - - -	22, 32, 44	Passenger Cars, - - - - -	51
Elevator, Freight, - - - - -	18, 30, 36, 60	Passenger Car and Freight Combined, - - - - -	46
Elevator, Prices, - - - - -	7	Patent Spring Guide-Shoe, - - - - -	47
Elevator, Hand Power, - - - - -	62, 64	Patent Slack Cable Stop, - - - - -	39, 57
Elevators, Erecting, - - - - -	61	Piston Packing, - - - - -	13, 19
Electric Motors for Elevators, - - - - -	45	Pressure Tank System, - - - - -	8, 23
Electric Passenger and Freight, - - - - -	9	Pressure Tank on Roof, - - - - -	8
Electric Freight, - - - - -	30	Safety Devices, - - - - -	11
Electric Passenger, - - - - -	32	Safety, Patent Friction Clamp, - - - - -	49
Freight Car, Plain Side, - - - - -	66	Safety, Patent Gravity, - - - - -	67
Freight Car, Wainscoated, Two Sides, - - - - -	68	Safety Speed Governor, - - - - -	55
Freight Car, Wainscoated, Three Sides, - - - - -	70	Safety, Patent Guide Way, - - - - -	69
Freight Car, Corner, - - - - -	72	Screw Hanging Machine No. 3, - - - - -	34
Geared Winding Machine No. 5, - - - - -	56	Screw Hanging Machine No. 5, - - - - -	38
Geared Winding Machine No. 6, Wood Frame, - - - - -	54	Screw Elevator Erected, - - - - -	36
Geared Winding Machine No. 8, Iron Frame, - - - - -	58	Screw Floor Machine No. 7, - - - - -	40
Geared Winding Machine Table, - - - - -	57	Screw Floor Machine No. 10, - - - - -	42
Hydraulic Valve, for Passenger or Freight, - - - - -	17	Sidewalk Elevators, - - - - -	28, 64
Hydraulic Engine, - - - - -	12, 14	Users of our Elevators, - - - - -	73



## ANNOUNCEMENT.

THE GRAVES ELEVATOR COMPANY was incorporated January 1st, 1892, as successor to the firm of L. S. Graves & Son (F. B. Graves), manufacturing, as a specialty, Passenger and Freight Elevators.

The above firm dated from 1878 as successor to L. S. Graves, who from 1863, manufactured boot and shoe machinery. The manufacture of elevators commenced in 1875, and has increased so rapidly that it now demands our entire attention and capital.

Most of the directors and executive force of the present company have been in the service of the original proprietor and his successors over twenty years, commencing as apprentice boys, and by their energy, skill and application, came to the top with the business.

The earnings have been largely invested in real estate, buildings, machine tools and appliances made necessary by the constantly increasing sales of our elevators.

We have just completed and put in operation a fire-proof boiler plant of 190 horse-power. We are now building a five-story addition to our works, 60x100 feet, for building cars, and have just contracted for another 100 horse-power Corliss engine to run it, having put in one of this size four years ago.

We publish in the last pages of this catalogue a list of over 2,600 actual users of our elevators, comprising hundreds of the best business houses, hotels and office buildings in the country. In previous editions we have published over one hundred testimonials from our customers, but discontinue it as too bulky and seemingly useless.

It is the ambition of the new company not only to maintain our past reputation for good, honest work, but to embrace every opportunity for improvement.

We are pleased to state that we have yet to hear of the first one of our elevators in use falling or of any accident to life, limb or property, or suit for damages caused by any neglect, breakage, lack of safeties or faults of construction on our part.

JUNE, 1893.

L. S. GRAVES.

## Write for Specifications and Prices.

We cannot publish a price list of elevators, as the conditions and requirements which go to make up the cost of material and erection are not alike in any two cases. This is especially true of Passenger Elevators where the conditions are more varied and requirements more complex and exacting, so that we seldom submit prices for nice passenger work without a personal inspection of the building or interview with architects or owners.

**For Freight Elevators** we will be pleased to submit specifications and prices, delivered and erected upon receipt of the following information:

State the kind of elevator wanted, for what use required, and the power most convenient to operate it.

If Hydraulic, to run from street mains, give the water pressure from the nearest level.

If Electric, give voltage of the power current.

If in a factory or mill to run by belts from a line shaft, give the position of line shaft with reference to hatchway.

Give capacity or maximum load to be raised, also average load.

Give car travel or full height that load is to be raised.

Give approximate size of the car required, or the size of hatchway.

State preference for style of car as shown in catalogue, on pages 66, 68, 70 and 72, whether plain or wainscoted, side or corner-posts.

We shall be glad to give personal attention to any inquiries from places within reasonable distance, and submit competitive figures.



## Passenger Elevators.

It would seem quite unnecessary to waste words on the commercial value of passenger elevators, when the top stories are always preferred and often at a premium for offices, light mechanical and artistic pursuits, because of better light, better air and less noise and dust.

### **HYDROPNEUMATIC OR PRESSURE TANK SYSTEM.**

Hydraulic elevators operated on this system have made the tall buildings or "sky scrapers" possible and profitable. For safety, speed, noiseless running, and staying qualities, they have no equal. They are perfectly automatic and self-regulating in their operation, using steam only when elevator is required, and pumping the same water over again. More fully described on pages 22 and 26.

### **ROOF TANK SYSTEM.**

In this system the water pressure is due to the height of the tank on the roof, and is generally much lower than has been found necessary to give the best practical results, and cannot be varied or increased to meet requirements. The weight of tanks and water on the roof, and pipe connections are also objectionable, so that while we put in many on this system a few years ago, it is now being superceded by the Pressure Tank System.

### **PRESSURE TANK ON ROOF.**

This will give the varied or increasing pressure, but adds more to the weight on the roof and has the same objections of pipe connections, besides being more expensive in first cost and more expensive to operate, because of the friction of water through long connections.

### **HYDRAULIC STREET PRESSURE.**

In cities or towns with an efficient system of water works, with good pressure and reasonable rates, it becomes a very desirable method of running passenger and freight elevators, saving expense in first cost of pump, tanks, etc., as called for with the Pressure System, but is not so desirable for high speed service. See pages 18 and 20.



### **BELT POWER PASSENGER ELEVATORS.**

We have put up many Passenger Elevators in manufacturing establishments to run by belts direct from the line shaft. Our Steel Screw Machines, Nos. 7 to 10, pages 40 and 42, are especially adapted to this service, being absolutely safe, smooth running, noiseless and durable. We also have many running by belts direct from **Electric Motors** with the most satisfactory results, and costing less than where they are run by the Direct Connected Electric Machines. See cut and descriptions on page 44.

### **ELECTRIC PASSENGER AND FREIGHT ELEVATORS.**

In the wonderful developments of electricity during the last few years, as a transmitter of power, the elevator has claimed its full share of benefits. While it cannot compete with the hydraulic elevator in speed and durability, it can more than compete with it in convenience and accessibility, and furnishes excellent means for running elevators which would otherwise be unattainable. See cuts and descriptions on pages 30 and 32.

### **BELT FREIGHT ELEVATORS—STEEL SCREW MACHINE.**

To those looking for a safe, first-class Freight Elevator of moderate capacity, to be used in part by passengers, where smooth and noiseless running is a prime necessity, we would call particular attention to cuts and descriptions on pages 36 to 42.

### **BELT FREIGHT ELEVATORS—SPUR GEAR MACHINES.**

To those looking for a strong, safe and durable elevator for heavy business, such as machine works, warehouses, factories, car houses, breweries, etc., where the little noise from cut gears is not objectionable, and consuming less power than the screw machine, we would refer them to cuts and descriptions on pages 54 to 60.

## To Architects.

In constructing a brick elevator shaft convenient to receive our horizontal engine, it is only required to leave an opening in the basement wall of the shaft 4 feet high by 4½ feet wide on side leading to the required space for the machinery. In many cases where passenger car does not go to basement, the hydraulic engine can occupy the space under the car, as shown on page 20.

Where it is not convenient to use the horizontal machine, our upright or vertical machine (see page 26) will only occupy a space about 4 feet square in the basement and first floor—no room above first floor required.

The height above top landing for a passenger car should not be less than 16 feet—18 feet is better. A car with baggage compartment should not have less than 22 feet.

In Freight Elevators the height should not be less than 12 feet above top landing—14 feet is better.

A brick elevator shaft should be 12 inches wider on the post sides and 6 inches deeper than the outside of the intended car, to give ample room for guide-post, counter-weight, cables, gas tubes, etc.

When the shaft extends through the roof and is lighted from the top it gives a pleasant appearance to the elevator and is less liable to accident.

In locating an elevator it is always advisable to arrange the opening on the same side on each floor, or have but one door opening into the car if possible. Cars with two openings at right angles or opposite are more difficult to operate and more liable to accident.

## Graves' Patent Safety Devices.

We will only call attention here to the principal Safety Devices we have in use, and refer to other pages for more detailed description.

The most reliable safety device consists in good construction, first-class material and faithful workmanship. But as the best machines will wear out in time, or fail by neglect, we deem it imperative to provide our elevators with the best and most reliable safety appliances, among which we will mention:

First—**Patent Friction Clamp Safety Stop**, for stopping cars gradually in case cables break or slack up, operated by counter-weights. (See page 49).

Second—**Patent Gravity Safety Stop**, operated by counter-weight, used on freight elevator with patented ratcheted guides. (See page 67).

Third—**Patent Safety Guide-Way**, to hold and prevent ratchets from breaking in case of accident. (See page 69).

Fourth—**Patent Automatic Stop**, to stop cars at top and bottom independent of shifting cable. (See page 57).

Fifth—**Patent Slack Cable Stop**, to stop winding machine in case the car meets with any obstruction. (See page 38).

Sixth—**Patent Valve Centering Device**, to prevent cars creeping up or down at landings. See page 17).

Seventh—**Safety Speed Governor**, to prevent cars from going down at an unsafe speed in case of accident, or belt breaking. (See page 55).

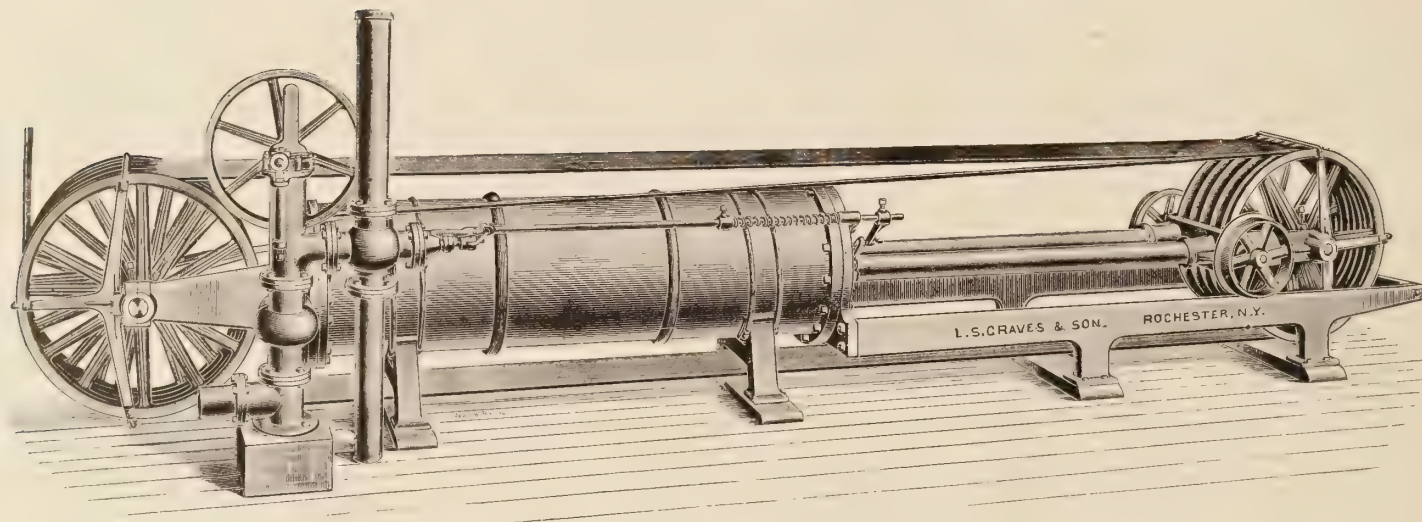
Eighth—**Automatic Closing Valve**, on hydraulic engine, to shut off water independent of hydraulic valve. (See page 13).

Ninth—**Hydraulic Cylinder Stop Ring**, to stop the piston and also car at top if the valves fail to operate. (See page 13).

Tenth—**Safety Guards**, to prevent cables running off.

Eleventh—**Extra Heavy Castings**, to prevent bursting, etc.





STANDARD HYDRAULIC ENGINE, WITH VALVE AND AUTOMATIC STOP.

## Hydraulic Engine and Valve.

On the opposite page we present a cut of our Horizontal Hydraulic Engine, showing some of our late improvements. These hydraulic motors are now so well and favorably known that little need be said to establish their claims as the safest, most complete and economical motors for passenger and freight elevators.

We build them in all sizes and lengths, to meet the various requirements, such as heights of buildings, water pressure, etc., and in all capacities from the house dummy, lifting 200 pounds, to the canal lift-bridge of 10 tons.

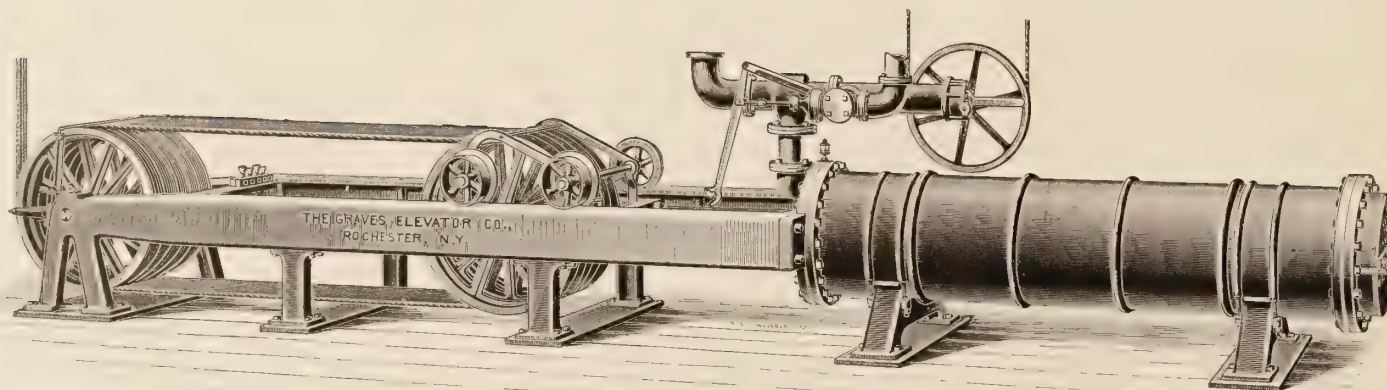
Our cylinders are accurately bored and then polished as smooth as glass inside by a special machine, which greatly reduces the friction and insures a durability of the piston packing heretofore unknown. With proper care and oiling, when used with clean water, we will guarantee them to run four years without repacking.

The Automatic Closing Valve that we are now using on our passenger elevators, shuts off the water when the car reaches the top, independent of valve mentioned.

Also our Hydraulic Cylinder Stop Ring is bolted firmly to the front of the cylinder, to stop the piston and prevent the car from going to a dangerous height if the valves or automatic stop should fail.

A Water Register is attached to measure the water used, when run from the city mains.

Brief: With heavy castings, large self-oiling sheave-wheels, double piston-rods, heavy planed guide-track, combined with accurate boring, fitting and finishing, we guarantee it has no superior for safety, economy of water, or low cost of packing and repairs.



NEW HYDRAULIC ENGINE (PULL MACHINE) FOR HIGH BUILDINGS, WITH VALVE AND AUTOMATIC STOP.



## Hydraulic Engine—Pull Machine.

On the opposite page is a correct cut of our new Hydraulic Engine, which we are now using and recommending for extra high buildings, with high speed passenger elevators.

This is a very heavy and durable machine, unlike any other construction, fitted with two heavy piston-rods, forged wrought-iron yoke, traveling sheaves carried on a four-wheel truck, running on planed guides, with cylinder polished inside, sheaves self-oiling and fitted with loose bushings. We believe this machine will operate a passenger car more miles with speed and safety than any other machine.

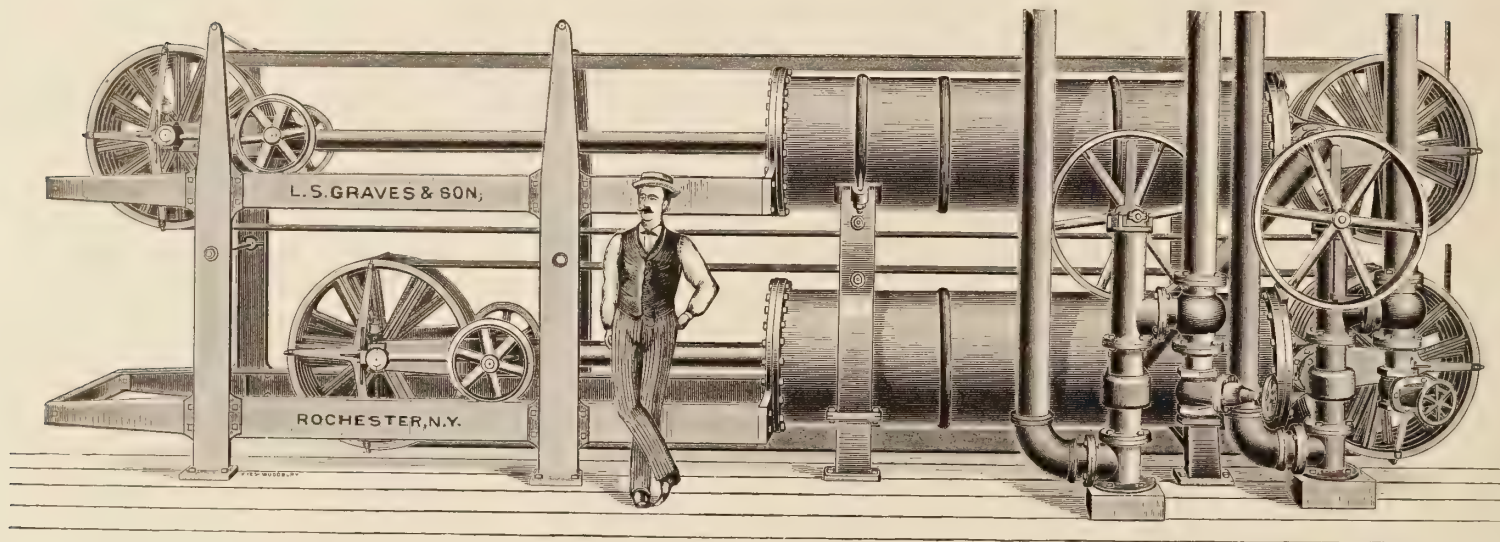
## Hydraulics.

A gallon of water (U. S. Standard) weighs  $8\frac{1}{3}$  pounds, and contains 231 cubic inches. A cubic foot of water weighs  $62\frac{1}{2}$  pounds, and contains 1,728 cubic inches or  $7\frac{1}{2}$  gallons.

We furnish an accurate water meter for each hydraulic engine when on city street mains. As this meter registers in cubic feet, multiply this by  $7\frac{1}{2}$  which brings it into gallons. To find the number of gallons used for one complete trip of elevator, multiply exact piston travel in feet by number of gallons per foot, as given in table.

## AREAS AND CAPACITIES OF CYLINDERS.

Diameter Inches	Area Square Inches	Gallons per one foot in length of Cylinder.	Diameter Inches	Area Square Inches.	Gallons per one foot in length of Cylinder	Diameter Inches	Area Square Inches	Gallons per one foot in length of Cylinder
1	.785	0.0408	7	38.484	1.99	22	380.134	19.74
1½	1.767	0.0918	8	50.265	2.61	24	452.39	23.48
2	3.141	0.163	9	63.617	3.30	26	530.93	27.58
2½	4.908	0.255	10	78.54	4.08	28	615.754	31.96
3	7.068	0.367	11	95.033	4.93	30	706.86	36.42
3½	9.621	0.499	12	113.098	5.87	32	804.25	41.76
4	12.566	0.652	14	153.938	7.99	34	907.922	47.16
4½	15.904	0.826	16	201.062	10.44	36	1017.878	52.84
5	19.635	1.02	18	254.47	13.21	38	1134.118	58.91
6	28.274	1.46	20	314.16	16.32	40	1256.64	65.28



DOUBLE HYDRAULIC ENGINE, FOR RUNNING TWO INDEPENDENT PASSENGER ELEVATORS.

## **Double Hydraulic Engine.**

In many fine buildings requiring two or more passenger elevators running in the same shaft, we find room insufficient in the proper location, so as a matter of economy and convenience, we place the two hydraulic engines, one over the other, as shown in cut on opposite page.

These two engines are entirely separate and independent in their action. Either car can be run separate or both at the same time.

The two passenger elevators in the Ellwanger & Barry fire-proof building in this city, also Yates Hotel, Syracuse, N. Y., Beersford Hotel, New York City, and many office buildings, are run in this way.

The economy and advantage of room in this arrangement, over the upright machines extending up the whole height of the building, is fast being recognized by owners and engineers.

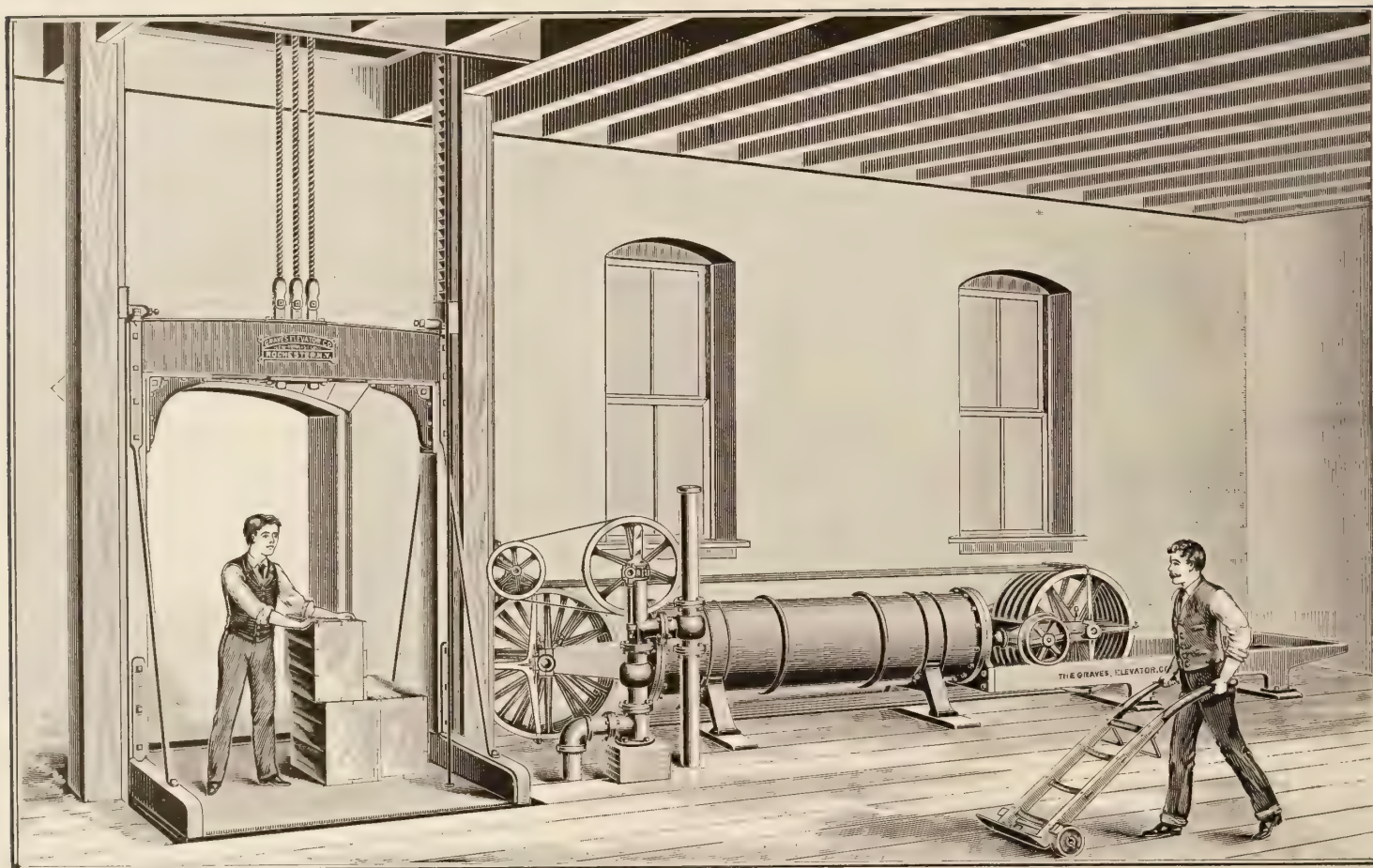
## **Hydraulic Valve.**

Our improved hydraulic valves are fitted with our new graduating piston, by which the flow of water is cut off gradually so as to prevent any injury to water pipes. The car is also brought to an easy and graceful stop by the same means.

Our piston and pinion rack are made of composition or bell metal, to prevent rusting or breaking. Our pinion which operates the rack is made of wrought-iron and cut from the solid forging.

Our valve cylinders are lined with brass; this insures their durability, and prevents rusting and cutting out of the leather packing. They are also fitted with our patent valve centering device, which stops and holds the valve with water passages entirely closed so the car will not creep up or down.





HYDRAULIC FREIGHT ELEVATOR-STREET SYSTEM.

## Hydraulic Freight Elevator—Street System.

On the opposite page we present a new cut of our Hydraulic Freight Elevator in working order, operated directly by pressure from the city street main.

Where city pressure is available for elevator use at a pressure from forty to one hundred pounds per square inch, it makes a very convenient and economical power for elevators.

They are easy to handle and manage, not liable to accident or disorder, and do not require a skilled mechanic.

**The horizontal hydraulic engine** is now recognized as the most servicable and economical form for elevator purposes, for the same reason that the horizontal steam engine or horizontal steam pump are for their respective uses. Why?

Because it is convenient and accessible in all its parts, all under the eye of the engineer or janitor.

Because the cylinder is open at the end and admits of easy lubrication. This saves the packing, prevents the piston from leaking and car from creeping.

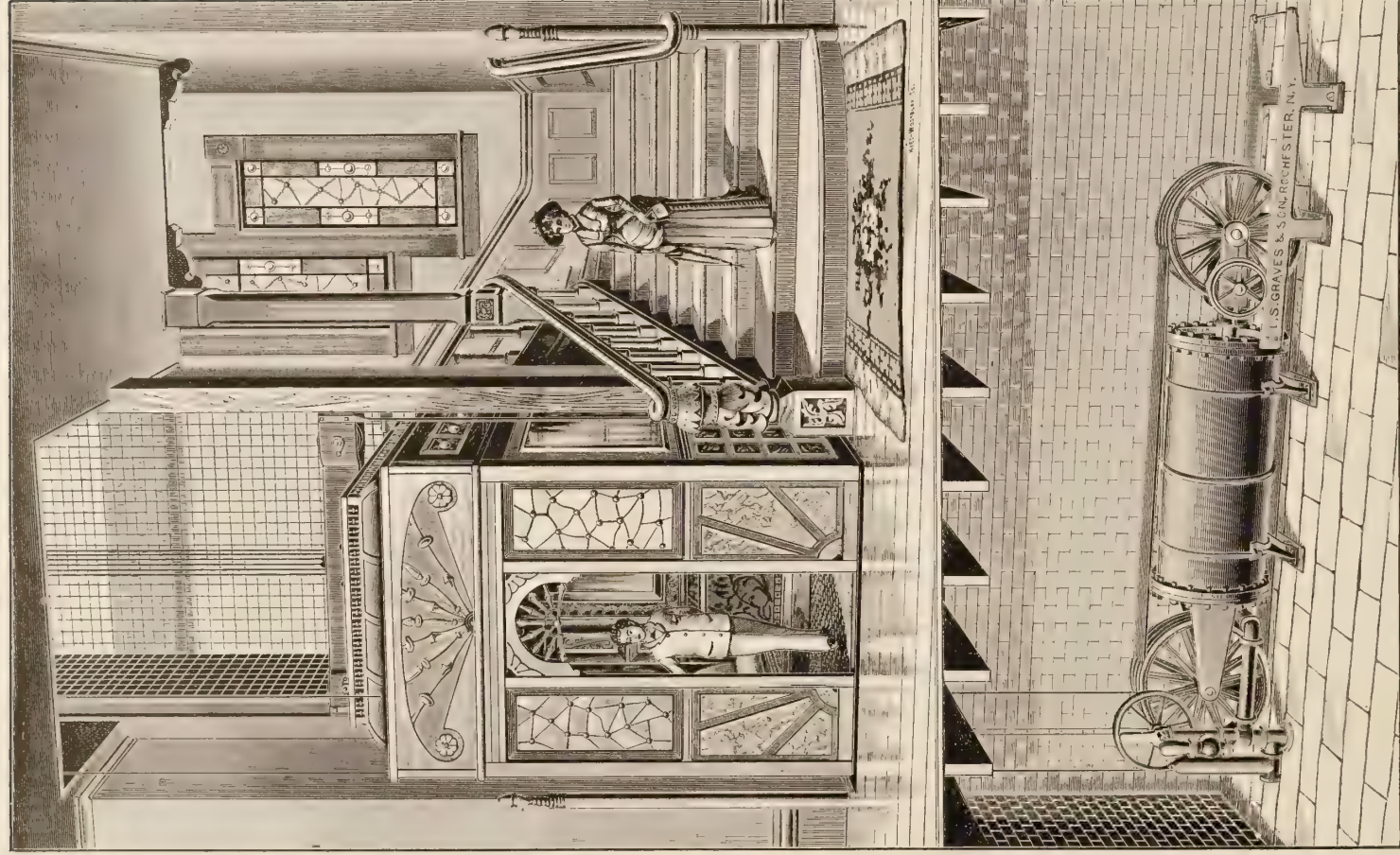
Because it is such an easy thing to tighten up the packing or replace it from the open end of the cylinder.

Because the piston packing will last from three to five years without replacing, according to the good care it receives.

Because the cylinder is short, cast in one piece and accurately bored and finished inside.

Because the piston travels so slowly, only one-tenth the speed of the car, hence little friction and wear.

Because the cable sheaves are so large that they save friction and thus preserve the cables.



HYDRAULIC PASSENGER ELEVATOR—STREET PRESSURE.



## Hydraulic Passenger Elevator—Street System.

The cut opposite is from one of our Hydraulic Passenger Elevators, operated directly from the city street pressure, showing the usual position of the hydraulic engine in the basement. The situation; size and capacity of the parts are varied to suit the different requirements.

We have shown in a previous page why the horizontal cylinder is preferred from the engineer's standpoint. We will now tell you why it is preferred from sanitary and economic reasons.

Because it is located in the basement or sub-cellar, the lowest and least valuable part of a building, where the water pipes are least liable to freeze or do damage by leakage or accident.

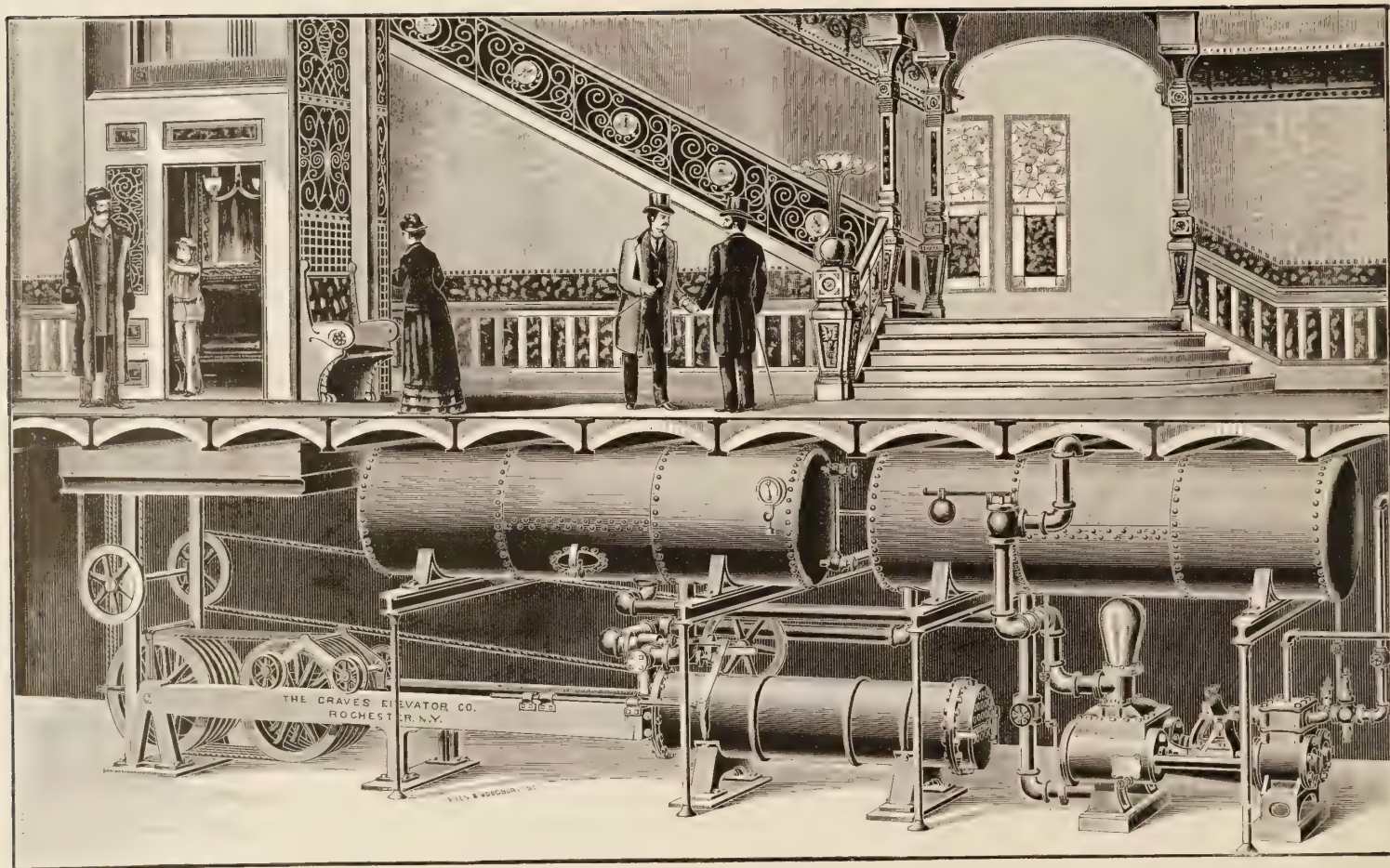
Because there is no part of the engine or valve extending above the first floor, occupying valuable room, objectionable and unsightly.

Because the water pressure is the greatest at the lowest point, and will lift the largest load for the amount of water consumed.

Because if there should be any noise from the flowing or shutting off of the water, it is below, where it will do no harm.

With our new graduating brass-lined valve, no damage can come to the city water pipes from shutting off of water or "water hammer."

Our passenger cars, of any style or price, are fitted with our patent vice clamp safeties, which are guaranteed to hold the car if the cables should break. They are also fitted with our patented spring guide-shoes, for smooth and noiseless running.



THE GRAVES' HYDROPNEUMATIC OR PRESSURE TANK SYSTEM.

## Hydropneumatic or Pressure Tank System.

The cut opposite gives a general view of the arrangement of the working mechanism of our Pressure Tank System, consisting of the hydraulic engine and valve (more fully described on page 15), also open and pressure tanks with pipe connections, pump and self-regulating devices, all situated in basement in a compact yet accessible position, under the immediate eye of the engineer.

It is perfectly automatic and self-regulating in its operation, steam being admitted and shut off from the pump according to the varying pressure in the tank, by a patent regulating device, requiring little attention when kept in good order.

By its many mechanical advantages, this system has become almost universally adopted for high buildings where high speeds, high efficiency, hard service, great dependence and staying qualities are prime necessities. Noiseless running, economy and speed controlling are some of its embellishments.

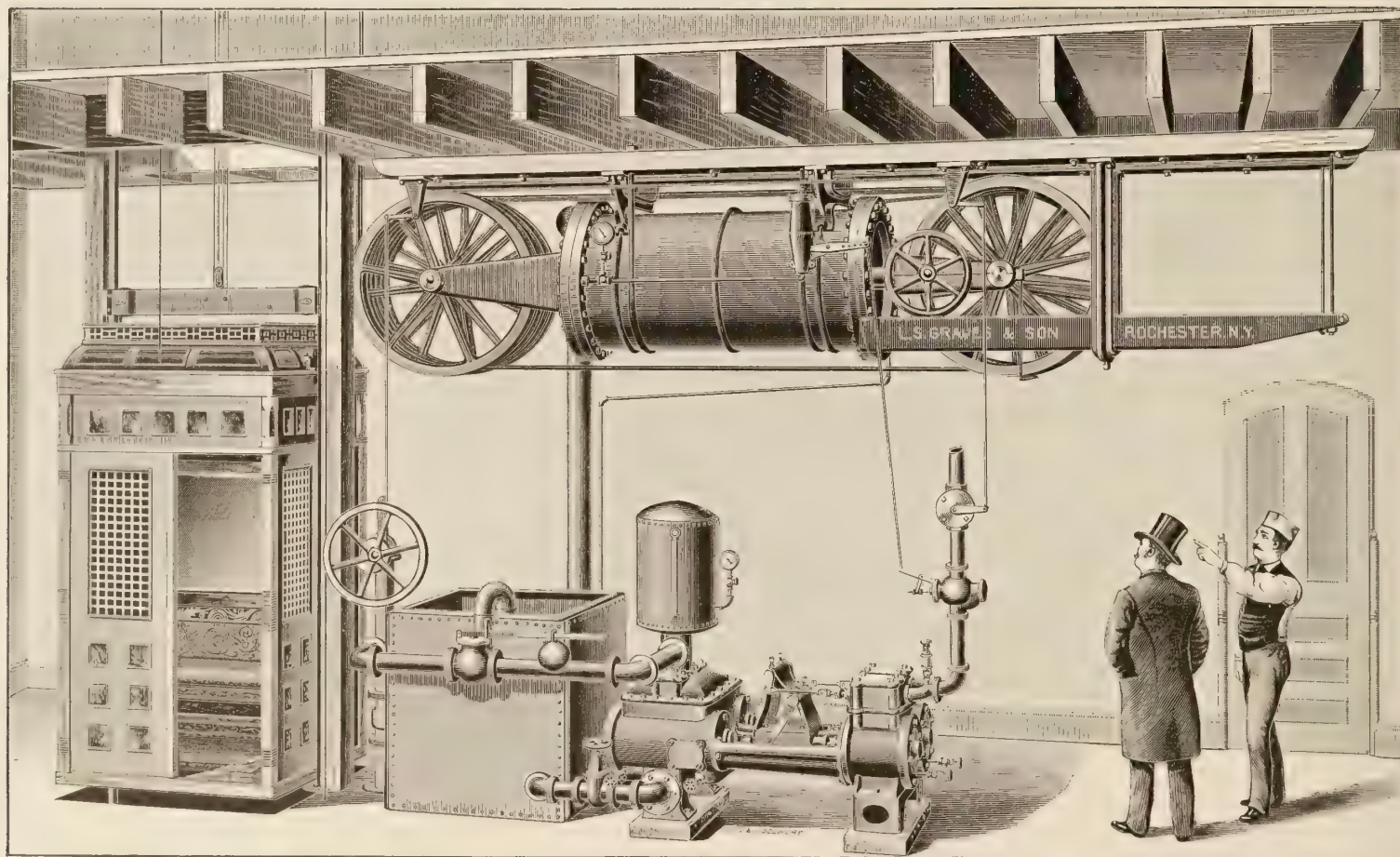
We think there is no other mechanical combination so advantageous for running high-class elevators.

Electricity promises much, and has a large and useful field in the elevator business, but in this high-class service it cannot compete.

When the most economical steam pump is used in this combination, we have got the question of running expenses down to the nearest to the "coal pile" of any system in use.

With our new heavy smooth-bored hydraulic engine (shown in cut), car fitted with our patent vice-clamp safety, also fitted with our patent spring guide-shoes, we can guarantee that for safety, smooth running and durability, it has no equal.





GRAVES' PATENT DIRECT PUMPING SYSTEM, SHOWING STEAM REGULATING DEVICE.

## Direct Pumping System.

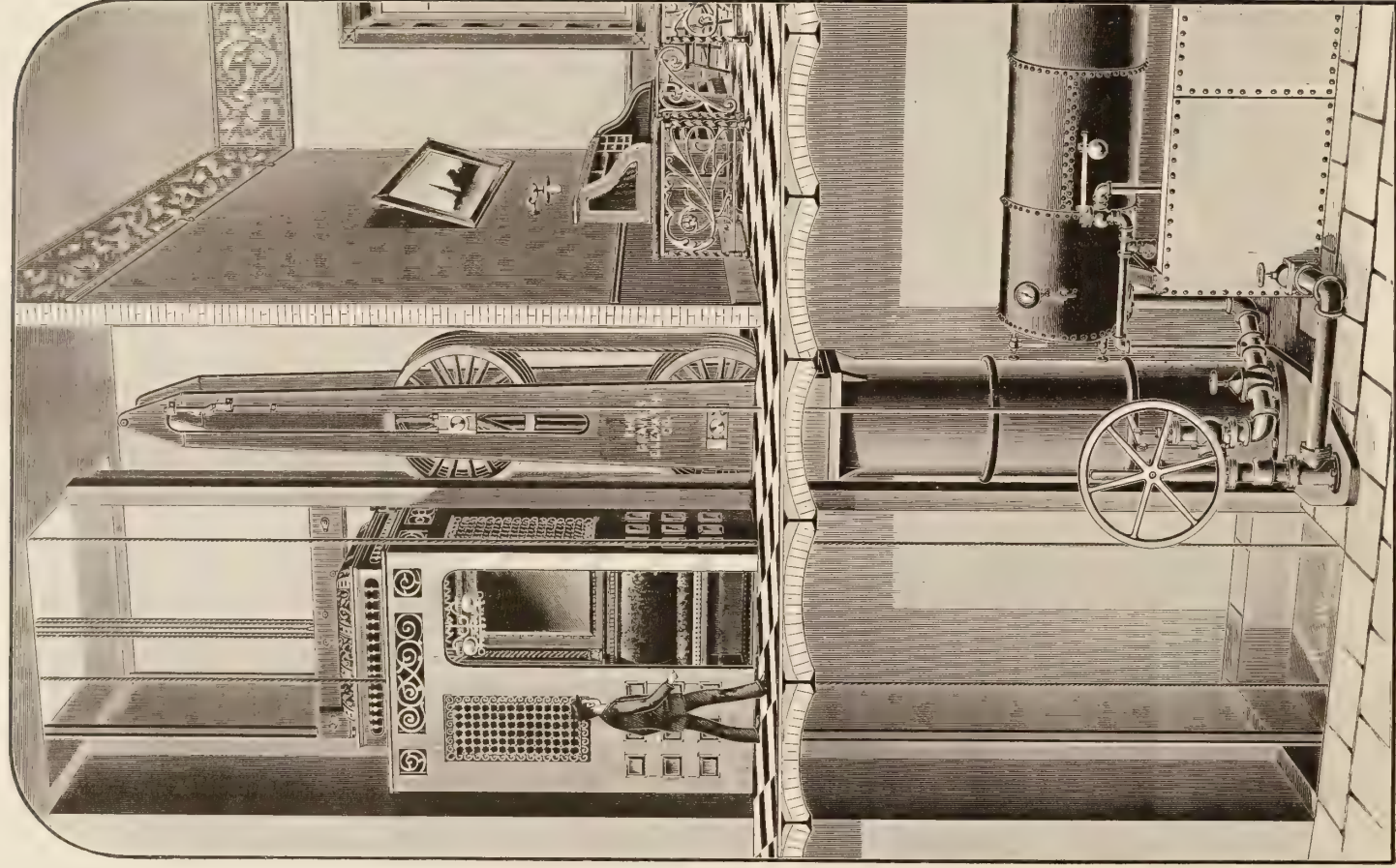
Hydraulic elevators to work successfully must have steady pressure of water. It makes but little difference how this pressure is obtained, whether by the pressure tank system in the basement, or by the tank placed upon the roof, or from the street water mains, or by our Direct Pumping System.

There are many buildings requiring elevators that have not the sufficient height or strength of walls for the roof tank, and have not the room in the basement for the pressure tank system. On the opposite page we illustrate our patent Direct Pumping System, designed to meet these wants, and which we think has effectually overcome the defects which have always attended this system.

With our patent regulating device, the quantity of steam admitted to the pump depends entirely upon the load to be raised, so that the use of steam is economized to the actual work being done. The hydraulic engine in this case we hang upon the ceiling. This is not a necessity of the system, but is often done to economize room.

We use the size of duplex steam pump best adapted to the required speed of the elevator, and increase the size of its air chamber sufficiently to absorb its pulsations, so that they will not be felt on the car.

This is a very compact and economical system for elevators, but where a first-class high-speed passenger service is required, with ample room for machinery, we recommend the pressure tank system.



THE GRAVES' VERTICAL HYDRAULIC ELEVATOR.

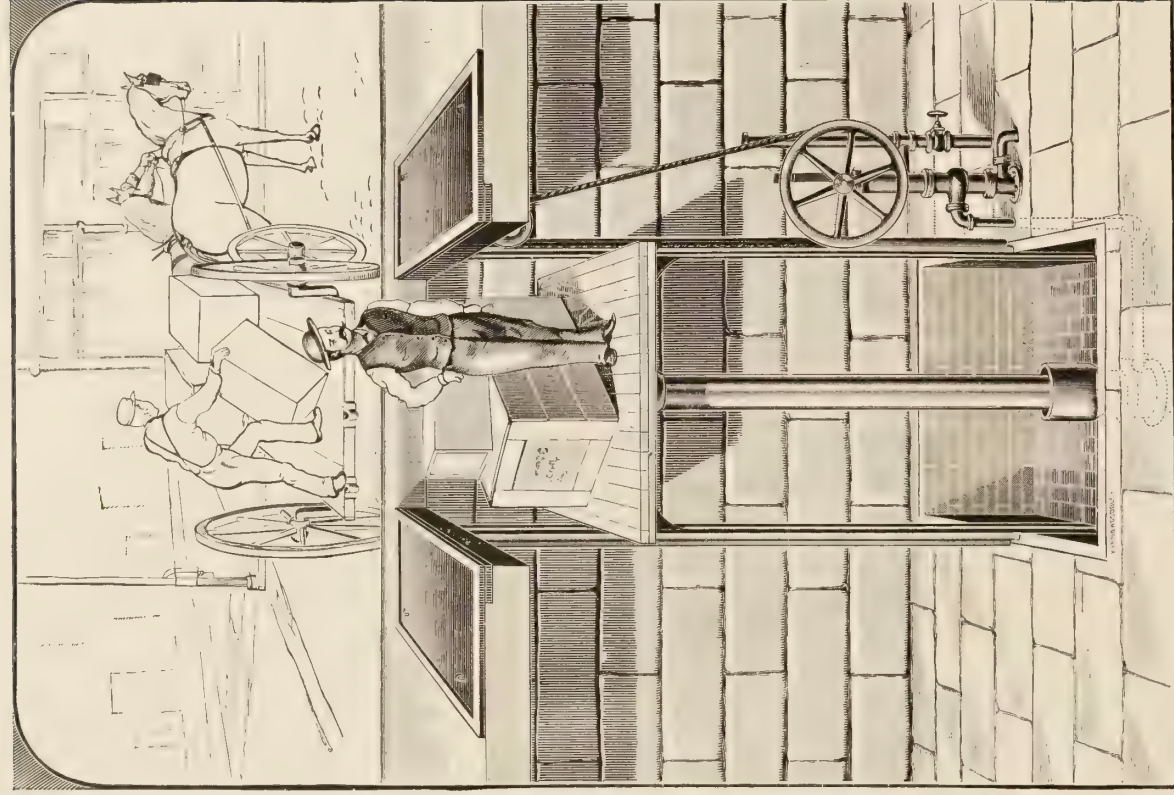


## The Vertical Hydraulic Engine.

All conditions being equal, we recommend the horizontal hydraulic engine, as shown on pages 12 and 14, as a matter of convenience in care and management. But we often find situations where the room is too valuable or not convenient to use the horizontal, consequently we put into practical use several years ago the very unique and self-contained Vertical Hydraulic Engine, shown on opposite page. This has proved a thorough, practical and durable machine in every respect, many of which we have running, giving the best of satisfaction.

This machine has two important points of merit which should commend it over other vertical machines in use. It is a self-contained machine, with the working parts, piston, cross-head, stationary and traveling sheaves, working in a heavy cast-iron guide-frame which cannot get out of line or fall down through the car like the suspended parts in other machines.

Another point is that we do not occupy any room outside of hatchway above the first floor. This is a valuable consideration as a question of room. Constructed on the same general principles of our standard hydraulic machines, with workmanship and material first-class in every respect, cylinders polished inside to insure the durability of packing, fitted with our improved brass-lined hydraulic starting and stopping valve, guaranteed perfectly safe, reliable and durable.



SIDEWALK ELEVATOR.  
DIRECT LIFT OR PLUNGER HYDRAULIC.

## Plunger Hydraulic Elevator.

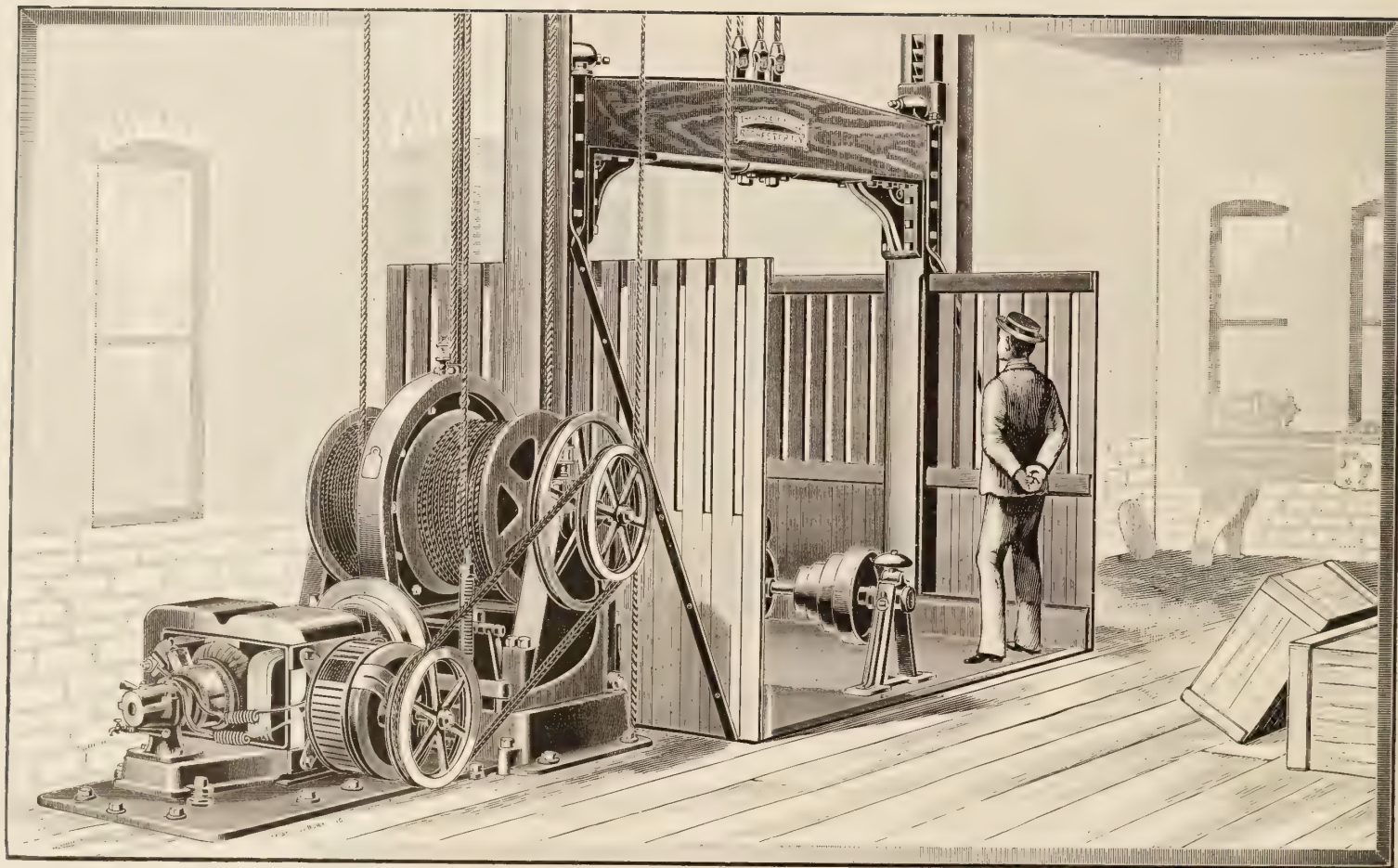
We present on the opposite page a cut of our Direct Lift or Plunger Hydraulic Elevator, for basements or sidewalks, or any service of moderate height. This elevator consists of an outside cylinder made of wrought or cast-iron; also an inside cylinder or piston generally of heavy drawn brass tubing, finished nicely, and passing into the outside cylinder through an adjustable packing box. The outside cylinder must be sunk as deep in the earth as the car or platform is required to ascend.

Where it is not expensive to sink the shaft for the outside cylinder, and for moderate heights, they have no equal for simplicity, compactness, durability, etc., requiring little attention and less repairs. They have been used to some extent for passenger service in high buildings, but not with any degree of economy in the use of water as attained with the horizontal sheave machines, as the accumulating weight of the piston, as it goes up, is decreasing its lifting capacity equal to the whole weight of the water required for its displacement in the lower cylinder.

Workmanship and materials guaranteed. Guide-posts of heavy cast-iron planed to fit car guides. Stops automatically at bottom and top, with safety stop to prevent piston going out if shipper cable should break.

In calling for estimates, give height, capacity and water pressure, and size of car required.





DIRECT CONNECTED ELECTRIC FREIGHT ELEVATOR.—4000 POUNDS CAPACITY.

## Direct Connected Electric Freight Elevator.

The cut opposite was made from a photograph of one of our heavy Electric Freight Elevators, 4000 pounds capacity, with a large car, running in one of the largest machine works in the country, where all the departments are run by separate electric motors.

The electric freight elevator seems to fill many places which no other could, like warehouses, cold storage houses or other places where power is not wanted or steam admitted, or hydraulic too cumbersome or expensive.

For these electric freight or passenger elevators we build special gearing, drums, etc., adapted to different speeds and capacities, yet the details of construction are essentially the same as described for the steel screw floor and hanging machines on pages 39 and 41, namely:

Cast-steel shaft and screw cut from solid forgings.

Screw-wheel of composition and cut and bolted direct to winding drum.

The compound thrust bearing is a special feature.

Fitted with patent limitation stop motion.

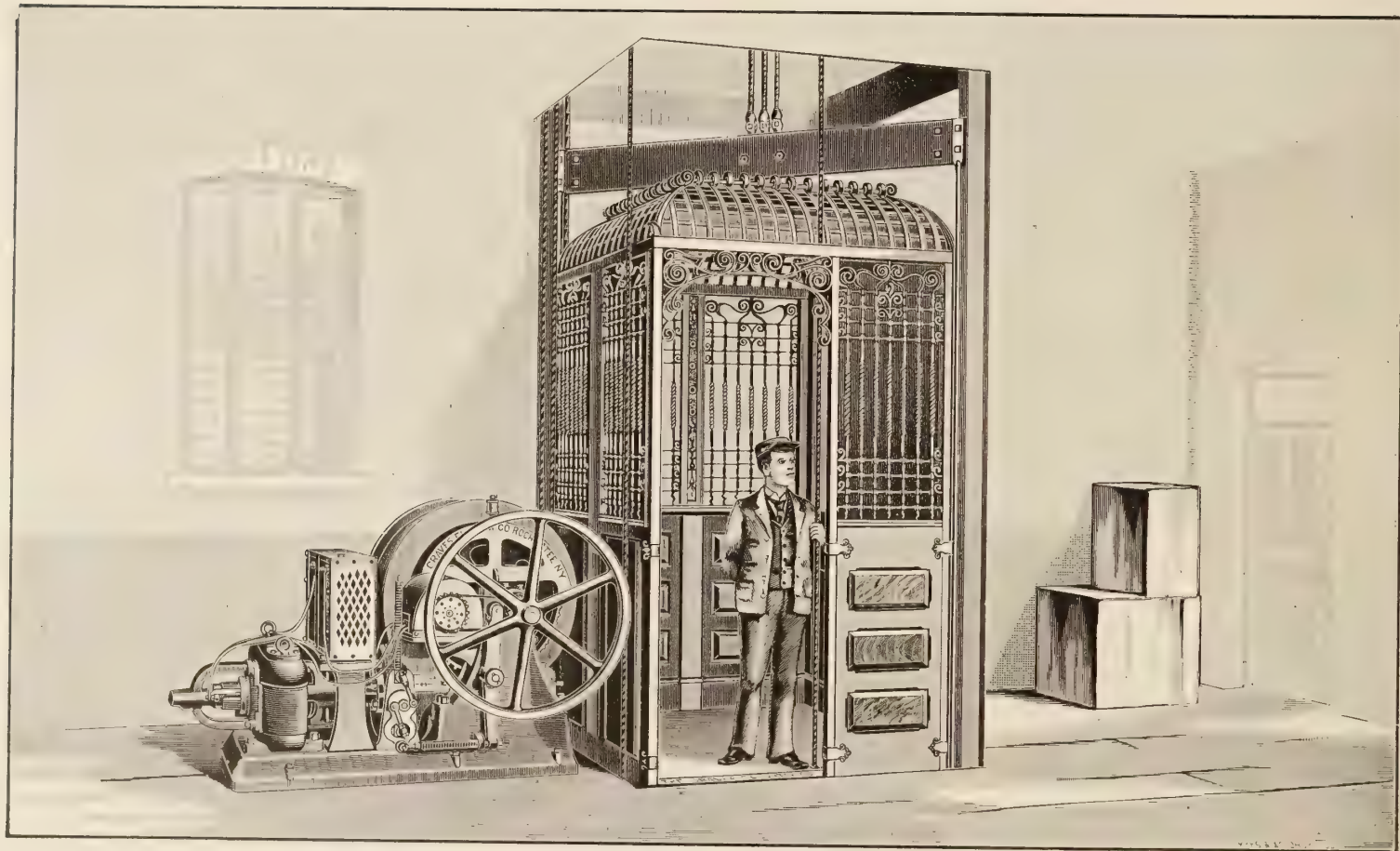
Also fitted with patent slack cable stop.

A new Edison reversible motor and controller (shown in this cut) was specially designed for our re-modeled steel screw floor machine.

The reputation of these Edison motors we need not enlarge upon, suffice to say they are guaranteed to us by the company.

The reputation of our steel screw machine for smooth and noiseless running is well established.

In offering our Electric elevators, either heavy or light freight, or high-speed passenger, we guarantee all parts of them equal in every respect to those of any other maker in the country.



DIRECT CONNECTED ELECTRIC PASSENGER ELEVATOR.



## Direct Connected Electric Passenger Elevator.

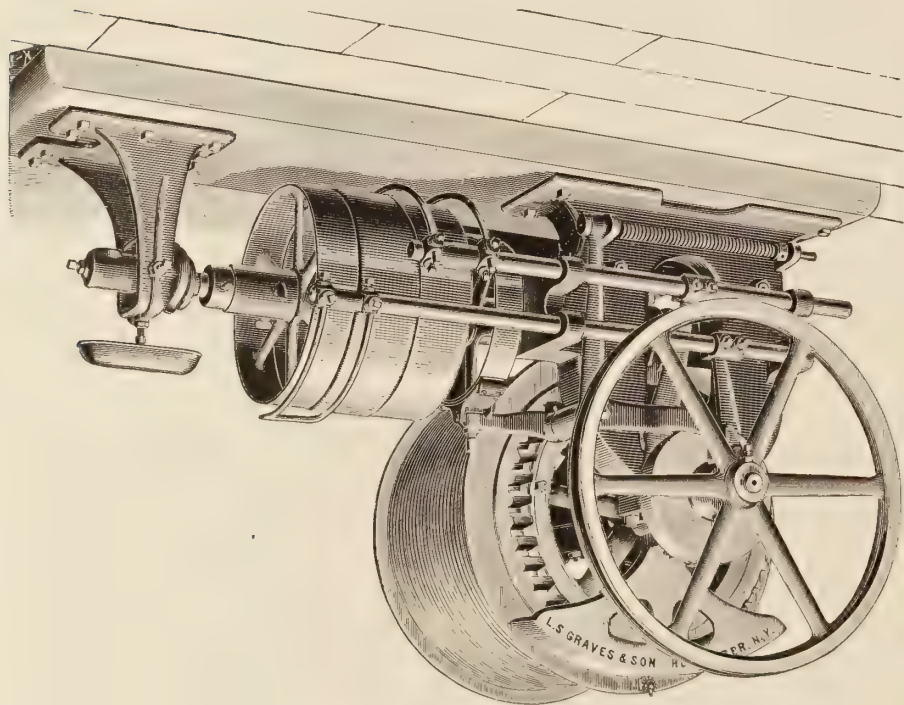
We present on the opposite page a cut of our new Direct Connected Electric Passenger Elevator, which we are now building from new patterns, and which offers a good combination for any reasonable speed and capacity, and is guaranteed in every respect equal to any other make.

It is over two years since we commenced to build Electric Elevators in a moderate way, and had them successfully running, yet we have felt in no hurry to crowd them on the market, as we considered the Electric Elevator in its experimental condition, and our works, at the same time, were employed up to their full capacity on hydraulic passenger and other kinds.

While all have been ready to admit that our Steel Screw machines, with their improved construction, were better adapted to successful electric work than any other make, they only depended upon complete electrical connections to make them the most complete. This, the experimental part, has given us and our customers some trouble, as it has all other makers.

We have installed many successful Passenger and Freight Elevators without our late improvements, which we will be pleased to refer to; but now, with our later changes and electric connections, we feel perfectly justified in offering the public a superior Direct Connected Elevator for passenger and freight service.

We use any design, cost, or quality of car best suited to the requirements, and fitted with patent safety attachments. Workmanship and material of the best.



NO. 3 STEEL SCREW HANGING MACHINE.

## Belt Elevators—Patent Steel Screw Hanging Machines.

The cut opposite is from our No. 3 Steel Screw Hanging Machine placed in its usual position upon the ceiling.

These machines have now been in constant use over seventeen years. Most of our original machines, although much inferior to our present build, are now running in good condition.

Their high reputation for safety, smooth and noiseless running, durability and freedom from accident, we think will not be questioned.

### General Construction.

We commenced to build these machines by making an entirely new departure from the old style of screw or "worm gear" machines, which had the screw and wheel running in an oil box as its only salvation from its poor and cheap construction.

We cut the screw from solid cast-steel forgings.

We make the screw wheel from the best anti-friction metal, copper and tin.

These two essential parts upon which the whole machine depends for safety and durability, we cut to work nicely together.

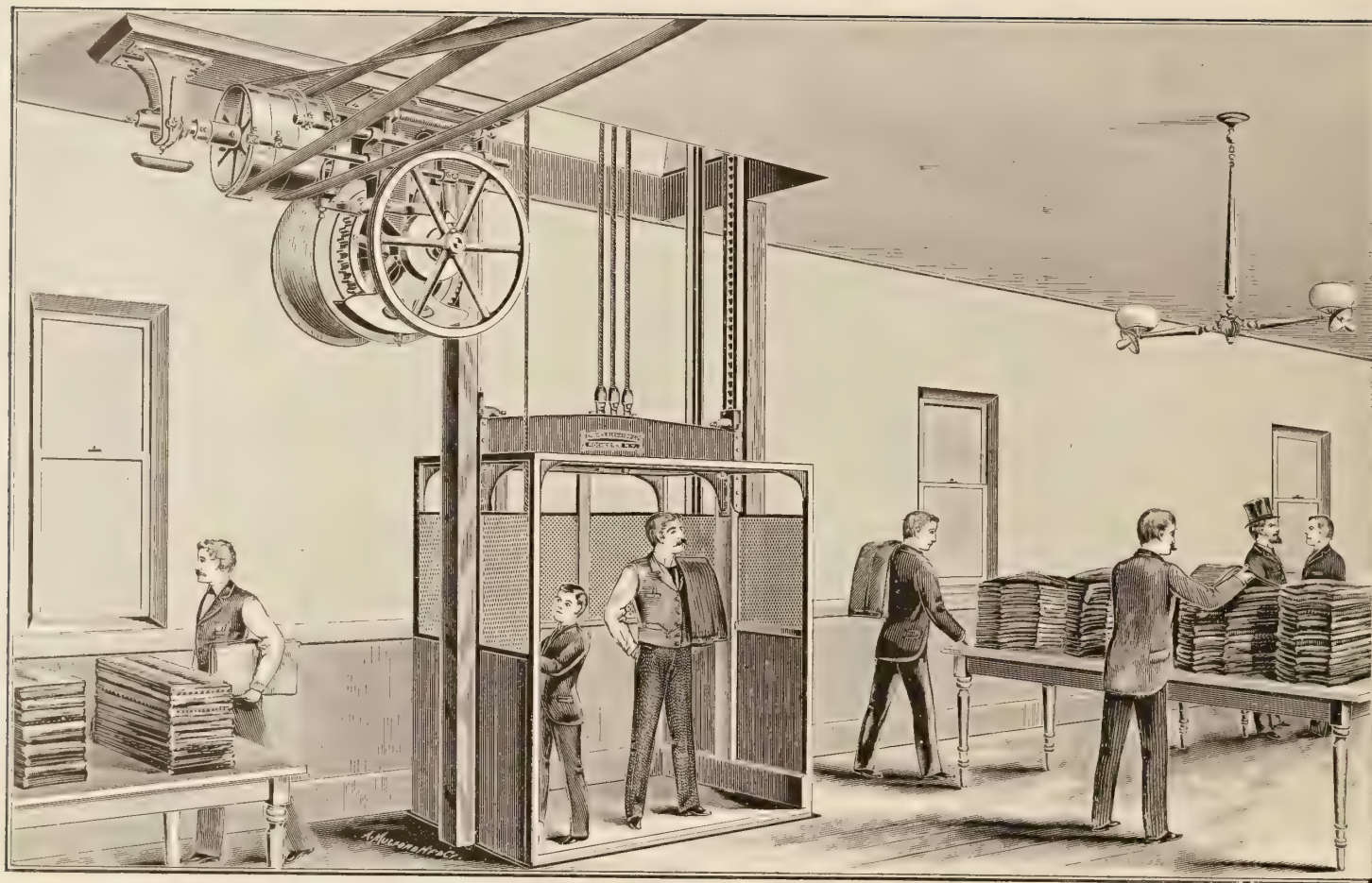
With this construction it was not necessary to run the parts in oil, using the same oil over and over again, which we deem wrong in principle and in practice.

We use clean oil for lubrication, and expose the parts where their condition can, at all times, be seen.

We bolt the screw wheel directly to the winding drum the only construction for absolute safety.

We put the screw above the screw wheel, which brings all the strain in the strongest part of the frame, and also carries the belts high out of head room. Some details of construction on page 39.





STEEL SCREW BELT ELEVATOR.

## Steel Screw Belt Elevator.

The cut opposite shows the Steel Screw Belt Elevator complete, with our new enclosed freight car, two lifting cables, counter-weight safety, patent safety stop motion and guides, as erected in a clothing house.

These screw machines are especially adapted for the best class of freight service, where a noiseless machine is required, rendering them particularly desirable for wholesale clothing, dry goods, boot and shoe and furniture houses, office buildings, etc., using generally the best class of freight cars with wainscoting or wire screens, or a half passenger car shown in cut on pages 46 and 70.

We have put up many with full cabinet cars for exclusive passenger use. We have also put up many for heavy freight use, such as wholesale groceries, hardware and tobacco houses, but generally recommend a spur gear machine for the heavier class of freight use.

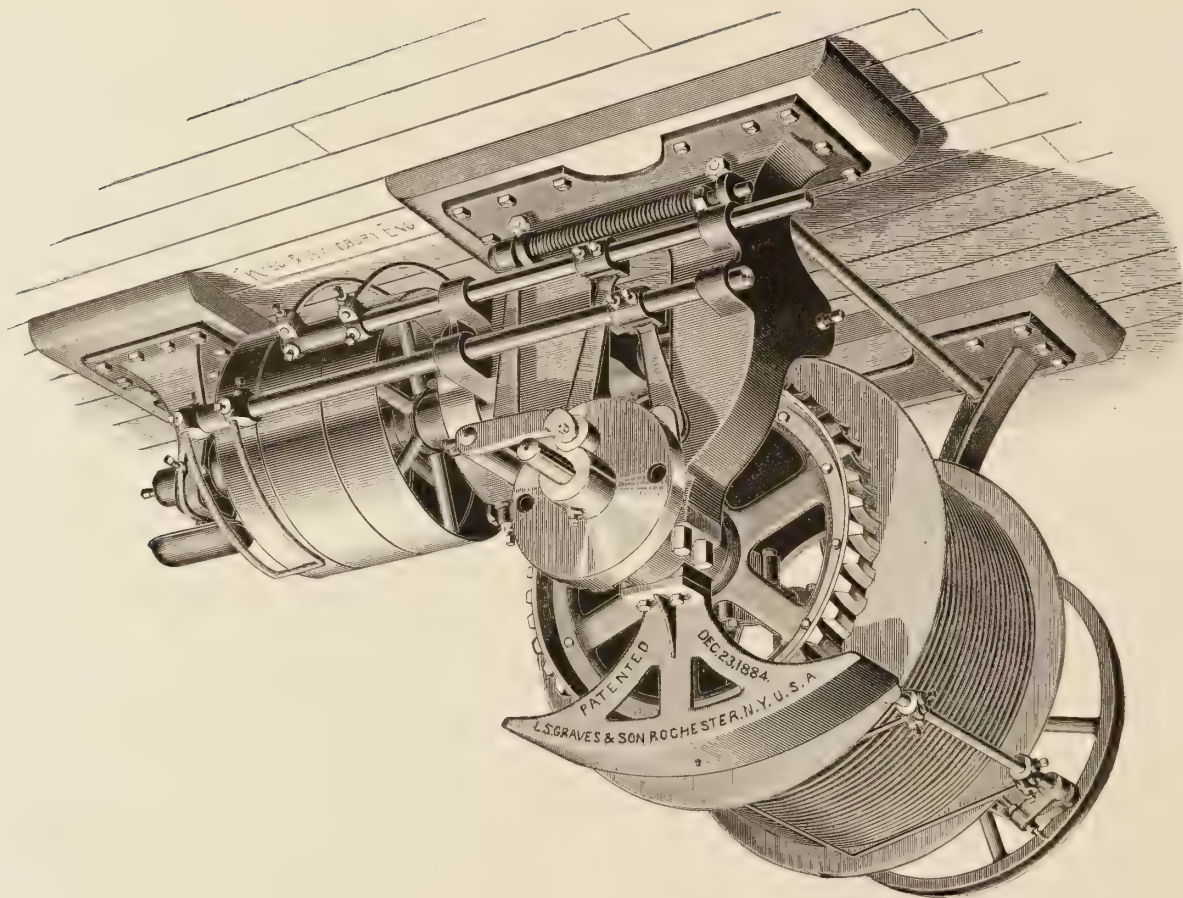
We build right and left-hand machines of all sizes, so that they can be erected either side of the hatchway, and take the lifting cables up inside, as shown in the cut.

The winding machine can be erected in basement or any story (except the top story) most convenient for the driving power.

The driving shaft should be parallel with the front of the car, and not less than twelve feet from it to give the proper length of belts.

The speed of the driving shaft should be 200 revolutions or more.

The hatchway should be enclosed from bottom to top, with doors to be opened only from the inside by the attendant on the car.



NO. 5 STEEL SCREW HANGING MACHINE, SHOWING SLACK CABLE STOP.



## Belt Elevators—Patent Steel Screw Hanging Machine.

The cut opposite shows our heavy No. 5 Steel Screw Machine secured to the ceiling in its working position.

We build five regular standard sizes of these ceiling machines, made right and left, with speeds and capacities as per table below.

### Some Details of Construction.

All sizes are fitted with cast-steel shafts and screws cut from the solid forging.

Shaft bearings are long and fitted with best hard Babbitt Metal.

Screw wheel is made from hard composition, nicely cut and bolted direct to the winding drum.

Loose pulleys are cast with oil recesses, bushed with hard composition sleeves—a perfect self-oiler.

Thrust bearings are also of hard composition, nicely fitted.

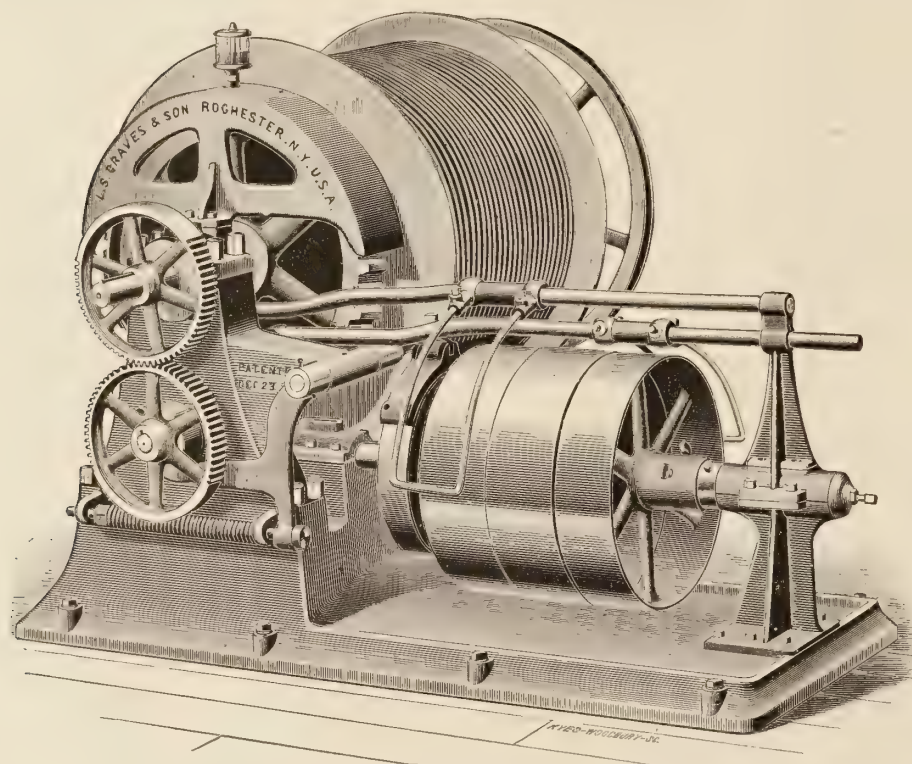
All sizes fitted with our patent limitation stop motion.

Also fitted with our patent slack cable stop.

No expense or pains is spared to render these machines strictly first-class in design, workmanship and material.

TABLE OF STEEL SCREW HANGING MACHINES.

Trade No.	Space Required on Ceiling	Shipping Weight.	Diameter Winding Drum	Diameter and Face of Drive Pulleys.	Combined Face of Pulleys	Maximum Number of Revolutions	Rise of Car per Minute	Maximum Load.
		890	22 inches.	15 x 4 inches.	13 inches.	420	59 feet.	2000
1	5 feet x 3 feet 3 inches.			15 x 4 inches.	13 inches.	420	64 feet.	1800
2	5 feet x 3 feet 3 inches.	925	24 inches.	15 x 4 inches.	13 inches.	420	70 feet.	3000
3	5 feet 6 inches x 4 feet.	1250	26 inches.	18 x 4 inches.	14 inches.	420	76 feet.	2500
4	5 feet 8 inches x 4 feet.	1400	28 inches.	18 x 4 inches.	14 inches.	420	81 feet.	3500
5	6 ft. 10 in. x 4 ft. 6 in.	1800	30 inches.	18 x 5 inches.	16 inches.	420		



NO. 7 STEEL SCREW FLOOR MACHINE. (RIGHT-HAND.)

## Belt Elevators—Patent Steel Screw Floor Machine.

The cut opposite is from a photograph of our Screw Floor Machine No. 7, right-hand. All the other sizes are of the same style and build.

It is advisable in many locations, especially when used for passenger service, to have the winding machine set upon the floor or suitable foundation close to the elevator shaft, where it is more accessible and liable to receive better care and attention than the hanging machine.

This is a very strong, heavy built machine, designed for safety and durability, with all its parts erected and bolted to a heavy cast-iron bed-plate.

These machines have been in constant use many years for the best class of freight elevators, and also for passenger use, and we have yet to hear of the first breakage or accident to one of them.

They can be belted direct from a line or counter-shaft in a manufacturing building, or run by a separate electric motor as shown on page 44.

The construction of the principle parts are the same as described for the hanging machines.

Fitted with cast-steel shaft and screw cut from the solid forging.

Shaft bearings are long and fitted with best Babbitt.

Screw wheel is made of hard composition, machine cut, and bolted direct to winding drum.

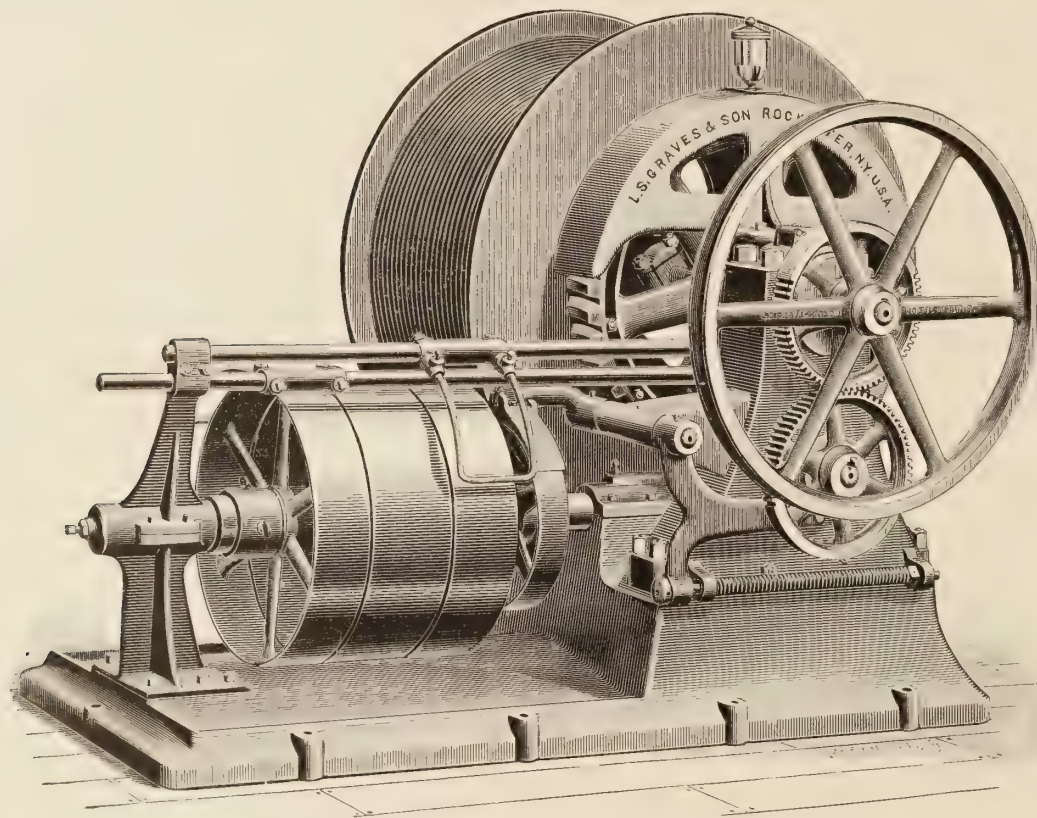
Loose pulleys are self-oiling, and bushed with composition sleeves.

Thrust bearings are removable and adjustable.

Fitted with patent limitation stop motion to stop the car at bottom and top.

Also fitted with patent slack cable stop to prevent accident from the unwinding of cables.





No. 10 STEEL SCREW FLOOR MACHINE. (LEFT-HAND.)

## Belt Elevators—Patent Steel Screw Floor Machine.

Our No. 10 Steel Screw Floor Machine shown on the opposite page, is especially adapted to passenger work, having a 36-inch winding drum for increased speed—yet we have many running on a nice class of freight work, where speed and noiseless running is very desirable.

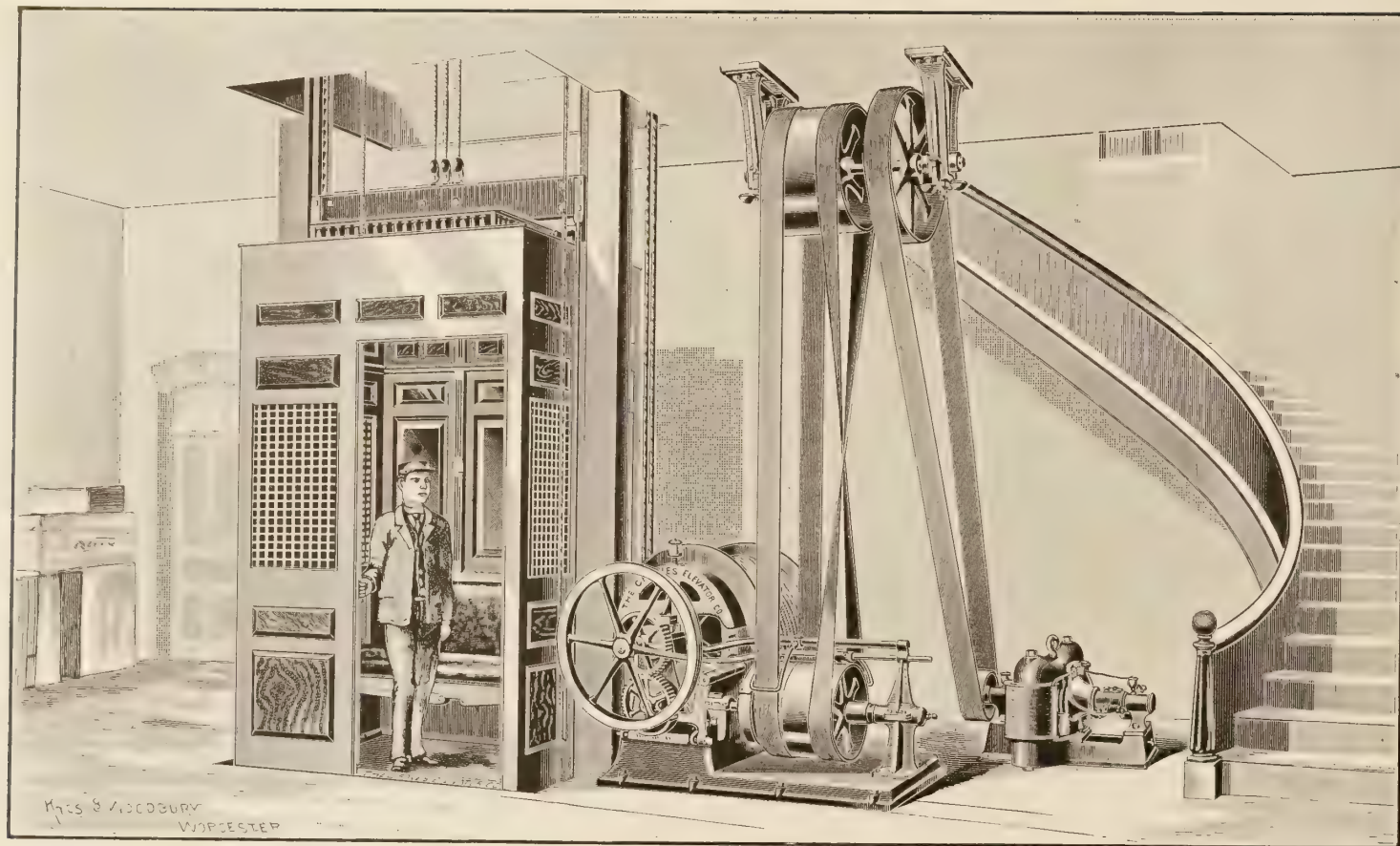
We build five regular standard sizes of these floor machines, as per table given below.

We build all sizes right and left-hand, which can be understood by comparing No. 10 on the opposite page, which we call left-hand (pulleys on the left-hand side) with No. 7 on the preceeding page, which we call right-hand. The object is so that the machine can be erected on either side of the elevator shaft most suitable to the building, or most convenient for the power to drive it.

The machine on page 44 running passenger elevator, is right-hand.

TABLE OF STEEL SCREW FLOOR MACHINES.

Trade No.	Floor Space.	Shipping Weight	Diameter of Drum.	Diameter and Face of Drive Pulleys	Combined Face of Pulleys	Maximum Number of Revolutions	Rise of Car per Minute	Maximum Load
6	5 ft. 6 in. x 4 ft. 6 in.	1800	26 inches.	20 x 4 inches.	14 inches.	420	70 feet.	3500
7	5 ft. 6 in. x 4 ft. 6 in.	1900	28 inches.	20 x 4 inches.	14 inches.	420	76 feet.	3000
8	6 feet 2 inches x 5 feet.	2400	30 inches.	20 x 5 inches.	16 inches.	420	81 feet.	4000
9	6 feet 2 inches x 5 feet.	2700	33 inches.	20 x 5 inches.	16 inches.	420	88 feet.	3500
10	6 feet 2 inches x 5 feet.	3000	36 inches.	20 x 5 inches.	16 inches.	420	96 feet.	3000



BELT PASSENGER ELEVATOR.



## **Belt Passenger Elevators.**

We find many manufacturing and mercantile buildings supplied with steam power and running shafting, where a passenger elevator with a neat cabinet car is required for the convenience of customers or help, and where economy would dictate the use of power from the shafting to run the elevator.

Our Steel Screw Floor Machine, particularly the No. 10, with a large winding drum to increase the speed, was designed to meet this demand, and is perfectly safe and noiseless.

On the opposite page we show one of these passenger elevators erected, showing position of winding machine in basement, or it can be on any floor where the power is most convenient, except the top story.

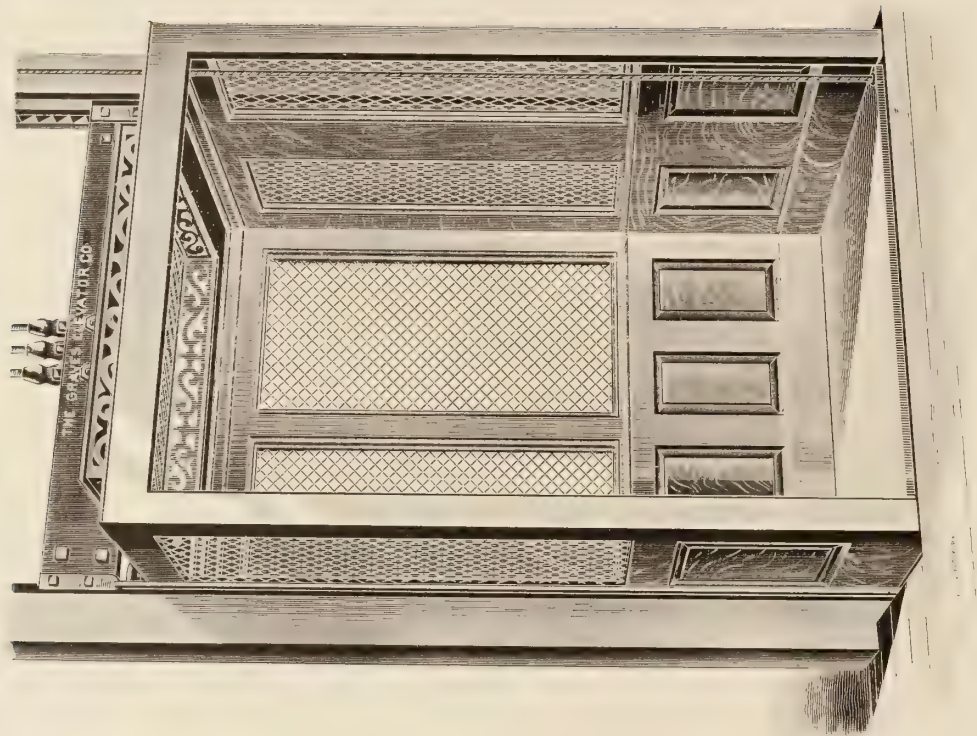
## **With Electric Motor.**

We also show in this cut the Electric Motor as applied to this elevator combination, in many places where there is no running power, making it possible to operate an elevator in any place where there is an electric current.

The point of difference between this and the direct connected electric (shown in pages 30 and 32) is that this is some cheaper in first cost, as it can be run by a regular standard electric motor, not requiring the reversible motor and controller like the direct connected machine.

A less expensive combination for moderate passenger service is made by the use of the steel screw hanging machine (shown in pages 34 and 36) using any style of passenger car desired.

We have put up many of these passenger elevators in wholesale houses, running them from both shafting and electric motors. They serve a very good purpose and give excellent satisfaction.



PLAIN PASSENGER CAR.

### Plain Passenger Car.

This cut was made from one of our low priced passenger cars, (open front) devoid of all carving or ornamentation, seats or mirror.

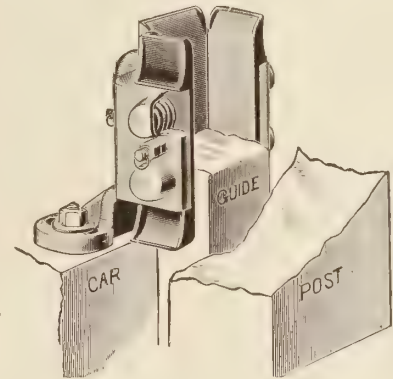
It had its introduction in the furniture and clothing business, where it was deemed desirable to use it for both light freight and passenger service.

Made of ash or oak, either full or half panels, and fitted with bronze wire guards as shown. The workmanship and material is as good as the best, and nicely finished.

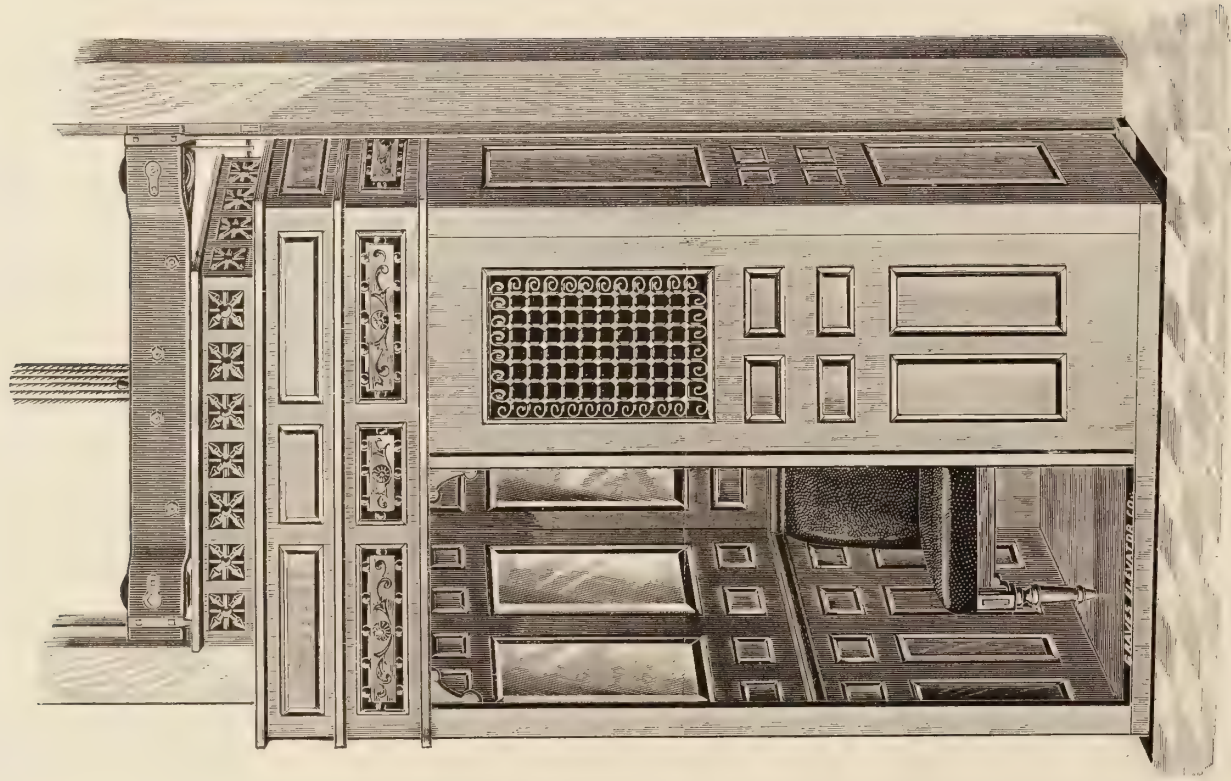
### Patent Spring Guide-Shoe.

This little cut shows one of our Patent Spring Guide-Shoes, which we are using on all our passenger elevators, four of which go on each car.

The object is easily understood. With the guide-shoes in general use by most all makers, the car will feel the least inequality on the guides, and the higher the speed the more noise and jar. With this shoe, the springs take it all up, and the car will travel five or six hundred feet per minute, without the least noise or jar. Their superiority in this respect has been acknowledged by thousands.







MEDIUM PASSENGER CAR.

### Medium Passenger Car.

The cut shown on the opposite page, from design No. 167, is a fair representation of one of several designs we make as medium-priced cars.

They are made mostly in oak, or any wood desired, with plain or antique finish, a neat modern design with raised panels and mouldings, fancy brass or iron screens in front or sides and fitted with nice upholstered settee, covered with leather or mohair plush, gas or electrolier, and bevel edge mirror, but no carving or extra ornamentation. The workmanship is first-class and with the best rub-down finish.

### Patent Friction Clamp Safety.

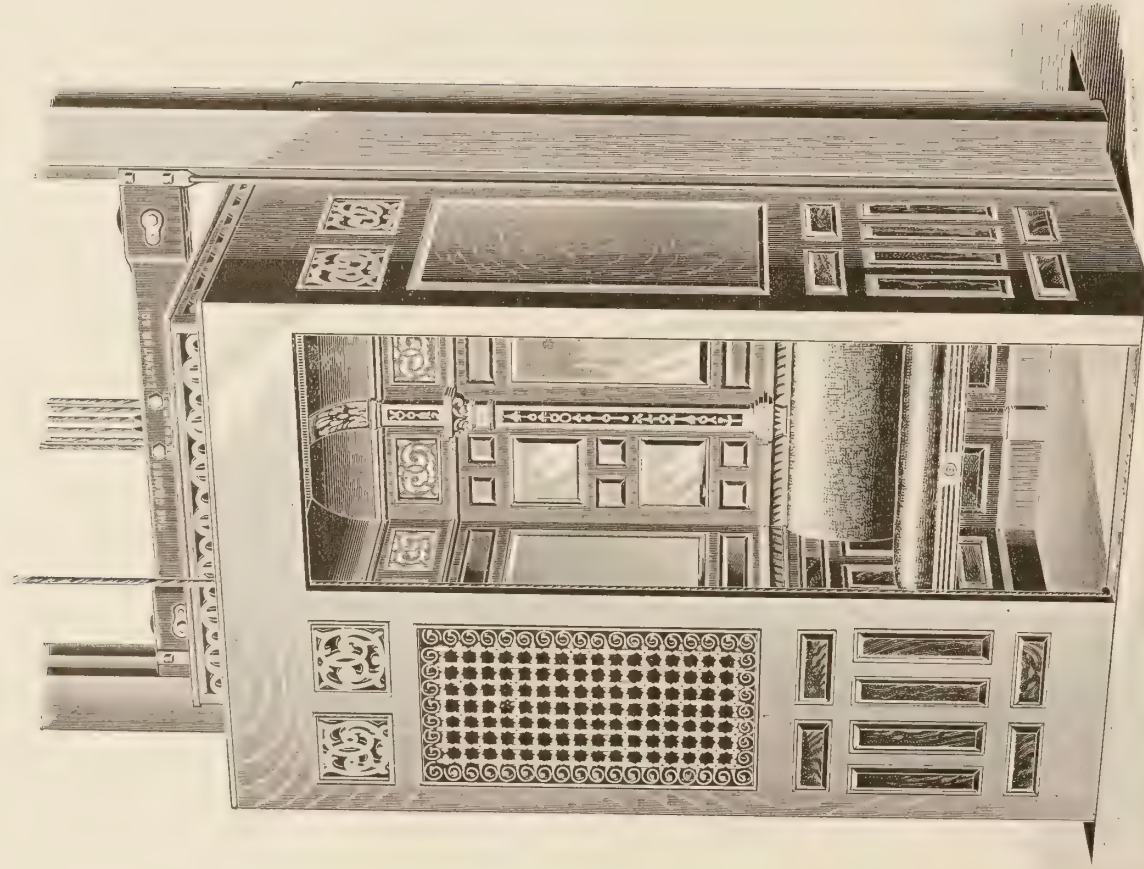
This friction safety appliance is shown in the wrought-iron beams seen passing across the top of all our passenger cars.

In this safety the counter-weight used to balance the car is attached to and operates the clamping jaws, and holds the car fast to the guideways if the cables break or slacken.

As these vice jaws are tightened by a screw operated directly by the counter-weight, the car is stopped easily and gradually, so that persons in the car will not feel a shock or jar.

The principle of operation is that the lifting and counter-weight cables revolve the clamp screw in opposite directions. The lifting cables, when tight, hold the jaws open, and when they fail the counter-weight cables close them.

An average counter-weight of 1,000 pounds will act with a net clamping force of twenty tons on each guideway, and by repeated and actual trials will stop the car with its load, of from 2,400 to 3,600 pounds, in from 15 to 30 inches.



NICE PASSENGER CAR.



## Cabinet Passenger Cars.

A nice Passenger Car with its beauty of design, elegance of finish and decoration, pleases the eye, and to the superficial observer seems the most important part of the passenger elevator.

On the opposite page we show a car made from design No. 1040.

When made from selected mahogany and elegantly finished and furnished, we will challenge comparison with any other make, as to quality and price.

We can only attempt to show three grades of cabinet cars in this catalogue. Plain, page 46; medium, page 48; and the nice one opposite, but have many other designs, of all grades, which we will be pleased to submit to prospective customers.

The style, quality, material and finish of the car should be made to match and harmonize with the building and its uses.

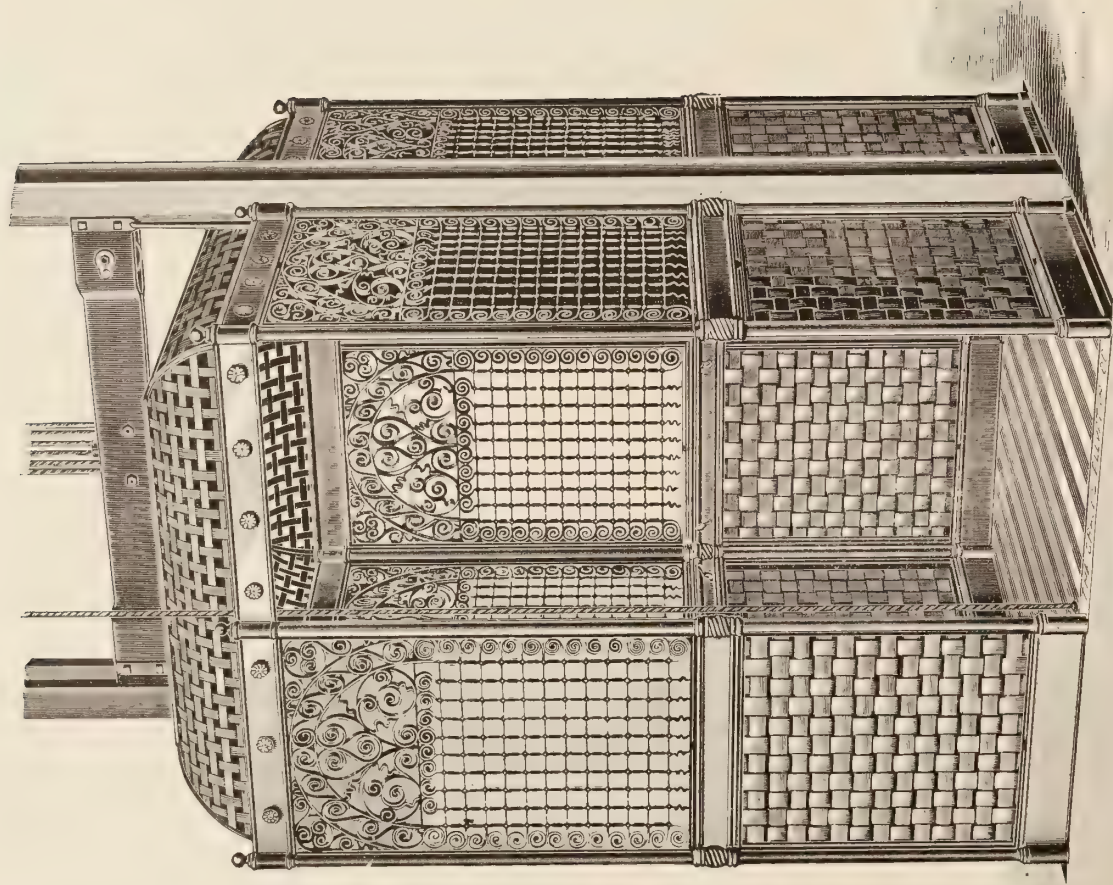
For material, plain mahogany is most preferable for a rich cabinet car. White mahogany with a nice finish, makes an elegant car for private residences. For the majority of cars, quartered oak, either plain or antique finish, is now called for. Selected white ash, with a nice finish, is very neat and appropriate for many situations.

We furnish elegant settees, upholstered seat and back in prepared leather, mohair, silk plush or wiltons.

Many high-speed cars for office buildings have no seats.

Bevel edge mirrors are quite ornamental and useful, especially where car is much used by ladies.

Plate glass or ornamental grills should be used in the upper panels if in an open shaft, but full cabinet if in a closed shaft.



EVES & DOUGLASS 50

ORNAMENTAL IRON PASSENGER CAR.

## Ornamental Iron Cars.

For the modern fire proof office building, nothing seems to be so appropriate and popular as the Ornamental Iron Cars. One of many designs of which we show in the opposite cut.

This is a plain, neat, strong car designed for substantial service.

We can furnish them in designs much more ornamental and expensive.

We also furnish cars in half panel with iron frame and top. One of this pattern shown on page 32.

The best passenger elevator service in the modern high buildings, calls for a large number of elevators, with moderate sized cars, and fast speed.

## Speed of Passenger Elevators.

The desirable speed for passenger elevators depends much upon the building and its uses.

In high office buildings, used mostly by business men, a speed of four to five hundred feet a minute can be tolerated, though by many not desired.

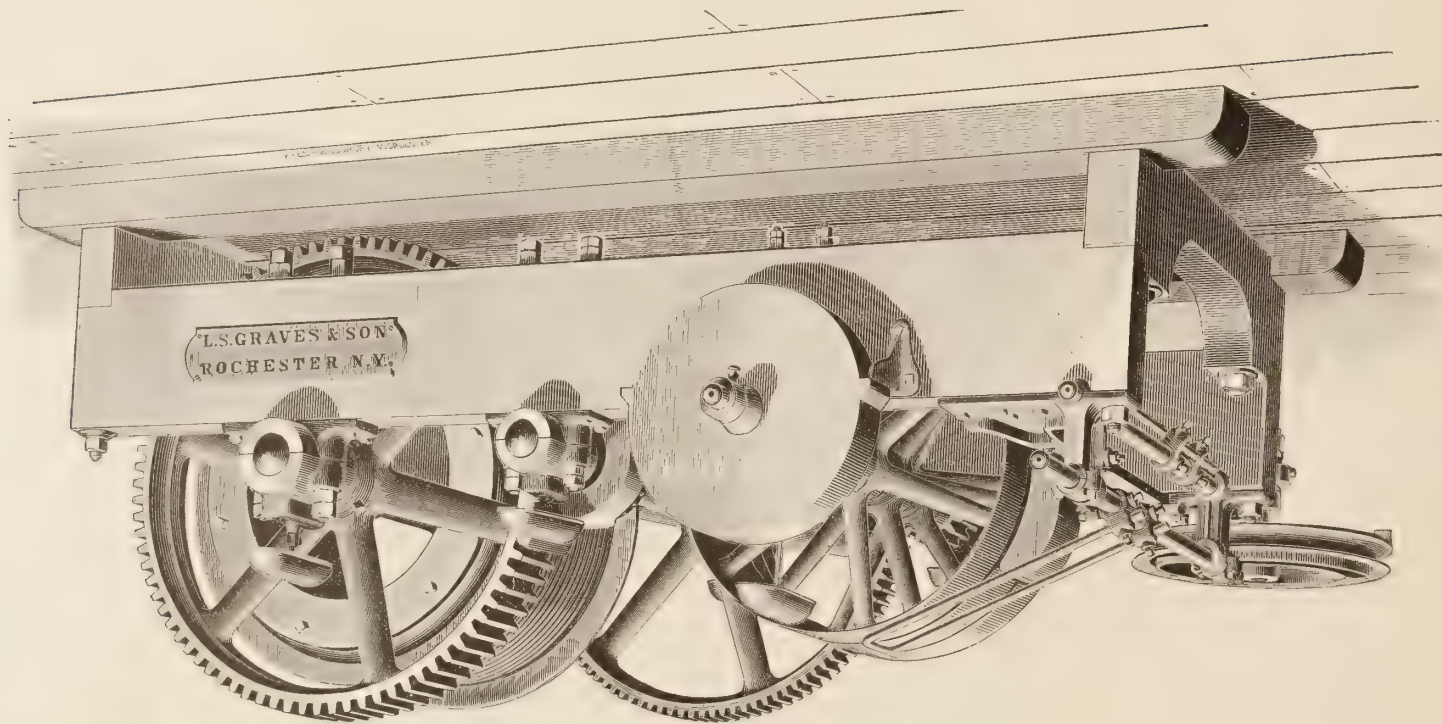
In hotels and mercantile houses, used in part by ladies and children, half this speed is more acceptable.

We are not advocates of excessive high speeds, yet we are on record for building the fastest running elevators in the world.

There is no secret in running hydraulic elevators at a high speed, the problem is to run them smooth and noiseless, and stop them gracefully at the landings.

With our smooth bore hydraulic engine, and multiple sheave system, graduating valve, and spring guide-shoes, we will challenge comparison with any in the country on speed and smooth running.





NO. 6 SPUR GEAR WINDING MACHINE, SHOWING SPEED GOVERNOR. (WOOD FRAME.)

## **Belt Freight Elevators—Spur Gear Machines.**

The cut opposite is from our No. 6 Spur Gear Winding Machine, but is a fair representation of the other sizes.

This cut shows a hard wood frame, but we are now building most of the heavier sizes with wrought-iron frames. See pages 58 and 60.

We build eight regular standard sizes of this spur gear machine, varying in lifting capacity from 800 to 10,000 pounds, and large sizes to order.

This is a strong, safe, compact and durable machine, made for heavy service.

They will run for years without breakage or repairs, and give no trouble to the user; will start, stop and hold their loads perfectly if properly cared for.

### **Details of Construction.**

Have nicely running machine-cut gearing.

Journal boxes are long, with self-oiling reservoirs and oil drippers.

Loose pulleys have long bearings, and self-oiling chambers.

Self-adjusting brake, and belt-centering spring.

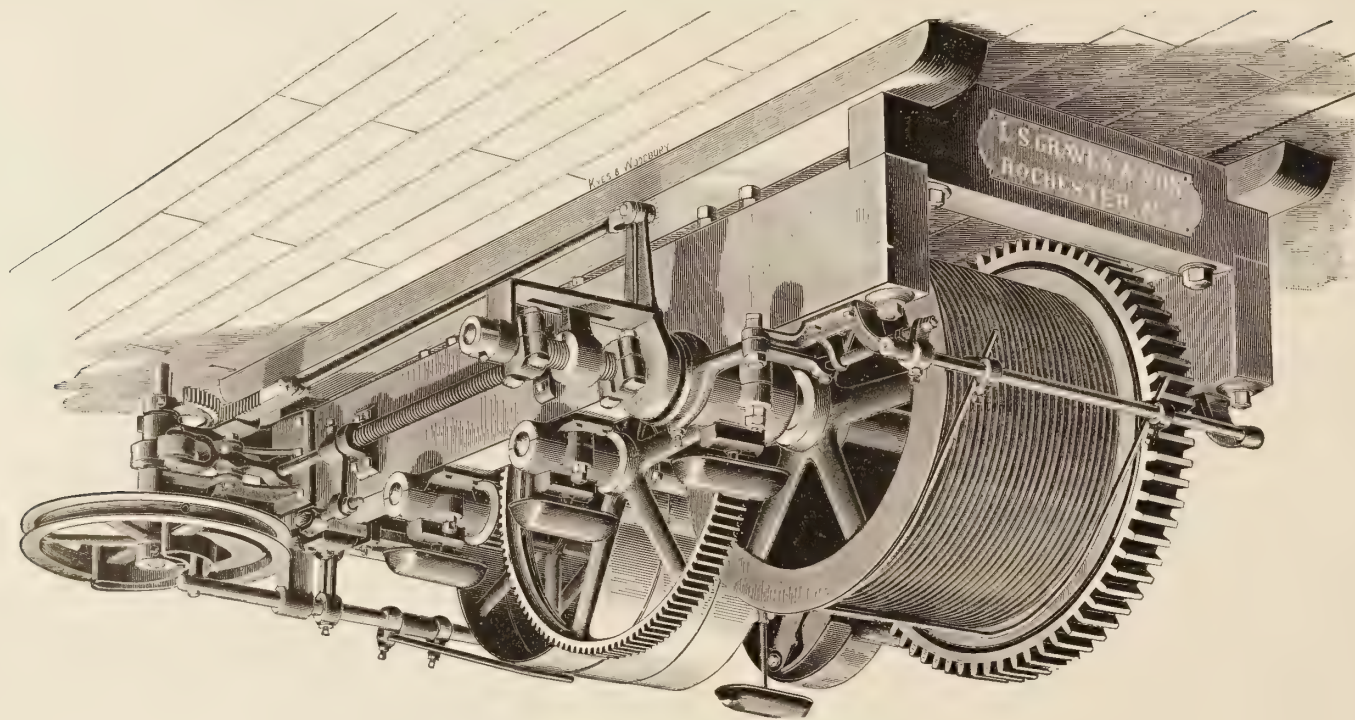
Double cam shifter, for separate belt shifting.

### **Safety Speed Governor.**

In the cut opposite we show our Safety Speed Governor, which we guarantee will prevent a load from running down at an unsafe speed.

If either belt should break or run off, leaving the load to run down, a slight increase of speed of winding machine will bring into use the centrifugal governor (inside stationary disc, shown in cut) and create such a friction that it is impossible for the car to go down at an unsafe speed. The greater the load the more is the friction.

We will test these governors with any elevator we put up, if parties have any doubts of their reliability.



NO. 5 GEARED WINDING MACHINE, SHOWING AUTOMATIC STOP MOTION AND SLACK CABLE STOP.



## Belt Freight Elevators—Spur Gear Machines.

We have introduced a cut on the opposite page to give a clearer view of our Limitation Stop Motion, also of our Slack Cable Stop.

These devices have been in use on our machines several years, and are quite well understood and appreciated.

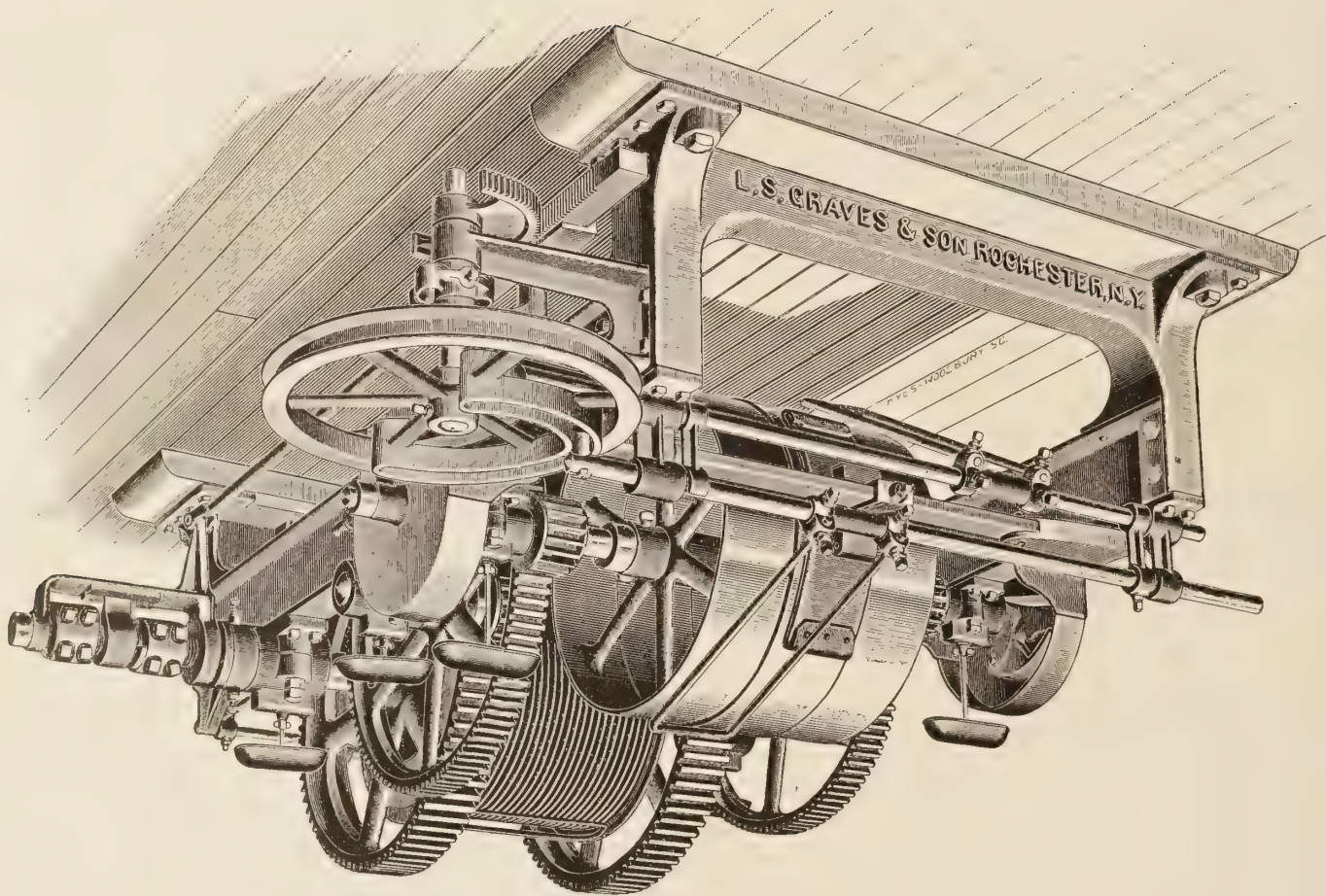
With the Automatic (or Limitation) Stop Motion, the winding drum is adjusted to make the certain number of revolutions necessary to raise the car from bottom to top, where it stops automatically without connection with the shifting cable. It is absolutely sure of action.

The office of the Slack Cable Stop is to stop the winding machine and prevent the cables from unwinding and doing serious damage, in case the car should meet with any obstruction in its descent, and stop; many accidents have happened from this cause, which the slack cable stop will entirely prevent.

All sizes of our spur gear machines are fitted with both these useful devices.

### TABLE OF GEARED WINDING MACHINES.

Trade No.	Space Required on Ceiling.	Shipping Weight.	Diameter Winding Drum	Diameter and Face of Drive Pulleys.	Combined Face of Pulleys	Maximum Number of Revolutions.	Rise of Car per Minute.	Maximum Load.
1	5 ft. 1 in. x 2 ft. 7 in.	800	20 inches.	18 x 3 inches.	12 inches.	240	63 feet.	800
2	5 feet 6 inches x 3 feet.	1000	22 inches.	20 x 4 inches.	14 inches.	240	60 feet.	1400
3	5 feet 11 inches x 3 feet.	1250	24 inches.	22 x 4 inches.	14 inches.	240	63 feet.	2000
4	7 feet x 3 feet 9 inches.	1800	26 inches.	24 x 4½ inches.	15 inches.	240	60 feet.	3000
5	7 feet 10 inches x 4 feet.	2400	28 inches.	26 x 5 inches.	16 inches.	240	60 feet.	4500
6	8 ft. 10 in x 4 ft. 6 inches.	3000	30 inches.	28 x 5 inches.	16 inches.	240	60 feet.	6000
7	9 feet x 4 feet 10 inches.	3900	30 inches.	30 x 6 inches.	20 inches.	240	60 feet.	8000
8	9 feet x 5 feet 2 inches.	4500	30 inches.	30 x 7 inches.	24 inches.	240	60 feet.	10000



DOUBLED GEARED, IRON FRAME WINDING MACHINE, No. 8.

## **Belt Freight Elevators—Spur Gear Machines.**

The cut opposite is from a photograph of our No. 8 Double Iron Frame Winding Machine, guaranteed for 10,000 pounds lifting capacity.

When the machines are erected complete, not only the machine, but the car, guides, cables and all the parts harmonize with the heavy service for which it is designed, making the most complete heavy elevator in the country.

Details of construction as per page 55.

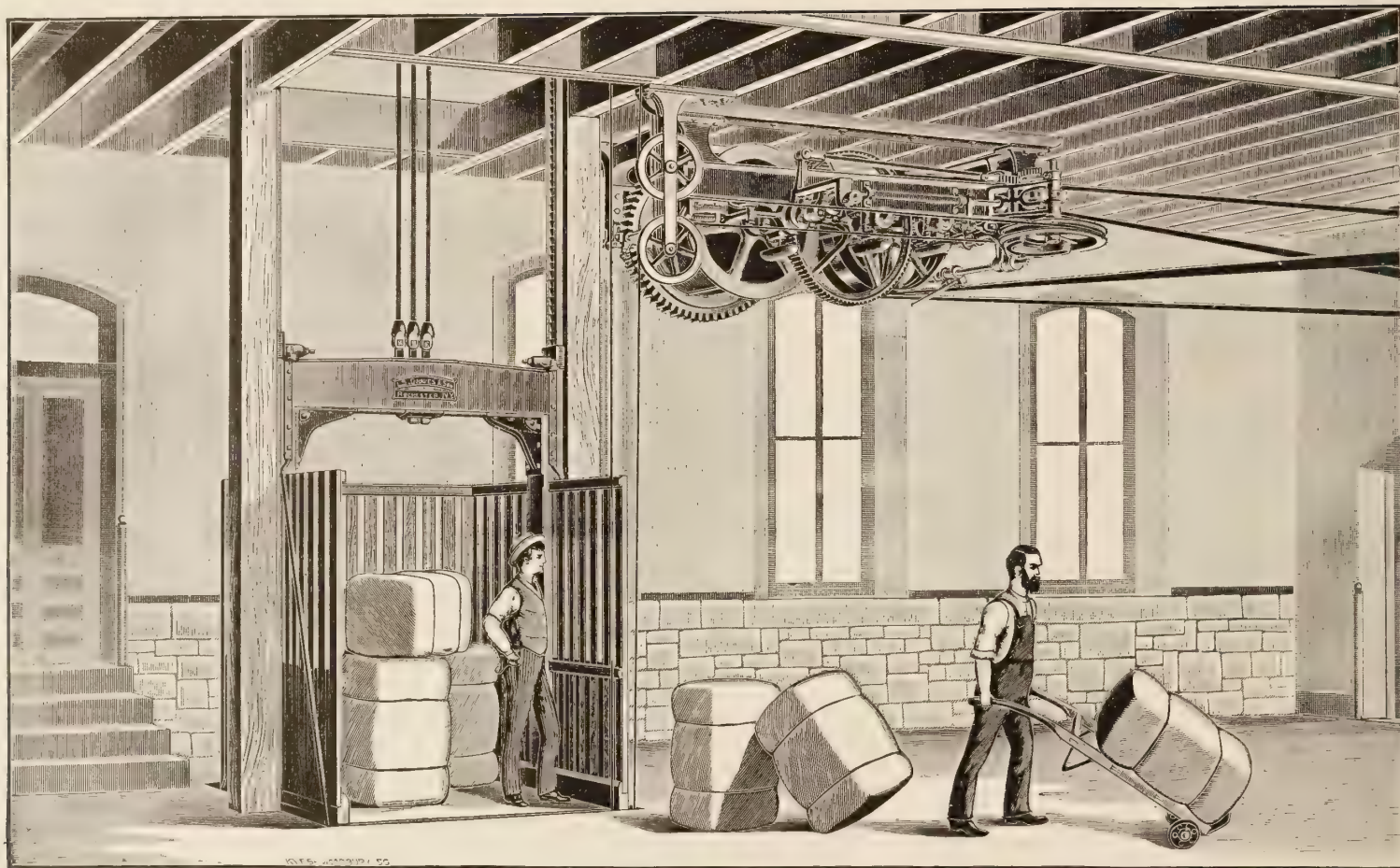
## **Fifteen Thousand Pound Elevator.**

We expected to show in this catalogue one of our 15,000-pound spur gear elevators, several of which we have built for railroad companies for raising electric cars, with a platform, about 12x35 feet, and operated by electric motors, but have not been able to so.

## **Wrought-Iron Frames.**

We have, until within a few years, made the frames of our spur gear winding machines of hard, seasoned ash, (shown on pages 54 and 56) which we consider much stronger and safer than cast-iron. But of late years we have introduced the wrought-iron frame for all of our larger sizes, using **I** beams for the main frame upon which the train of gearing is bolted, which takes all the strain; and using cast-iron for the end connection. (See pages 58 and 60). So that now we give our customers a choice by paying the difference in price, which will be stated in specification.





NO. 4 GEARED ELEVATOR COMPLETE, IRON FRAME MACHINE.



## **Belt Freight Elevators—Spur Gear Freight Elevator.**

We show on the opposite page one of our No. 4 Medium Size Gear Elevators erected complete.

We build all sizes of these winding machines, right and left-hand, so they can be located either side of hatchway.

They can also be secured to the ceiling of basement or any floor except the top, which is most desirable for the building, or convenient for the power to drive it.

This is eminently the factory elevator. We have put them up in manufacturies of all kinds, putting in the third and fourth elevator in the same establishment after a trial of the first.

### **Erecting.**

In putting up our elevators, it is understood that owners prepare and finish the hatchway ready to receive the elevator.

We furnish and erect suitable guide-posts and timbers overhead to support the sheave wheels.

The car can be made of the style shown in cut opposite, wainscoted three sides, or of any other style shown on pages 66, 68 or 70.

In the absence of instructions from architect or owner, we aim to make car to meet the requirements of the business.

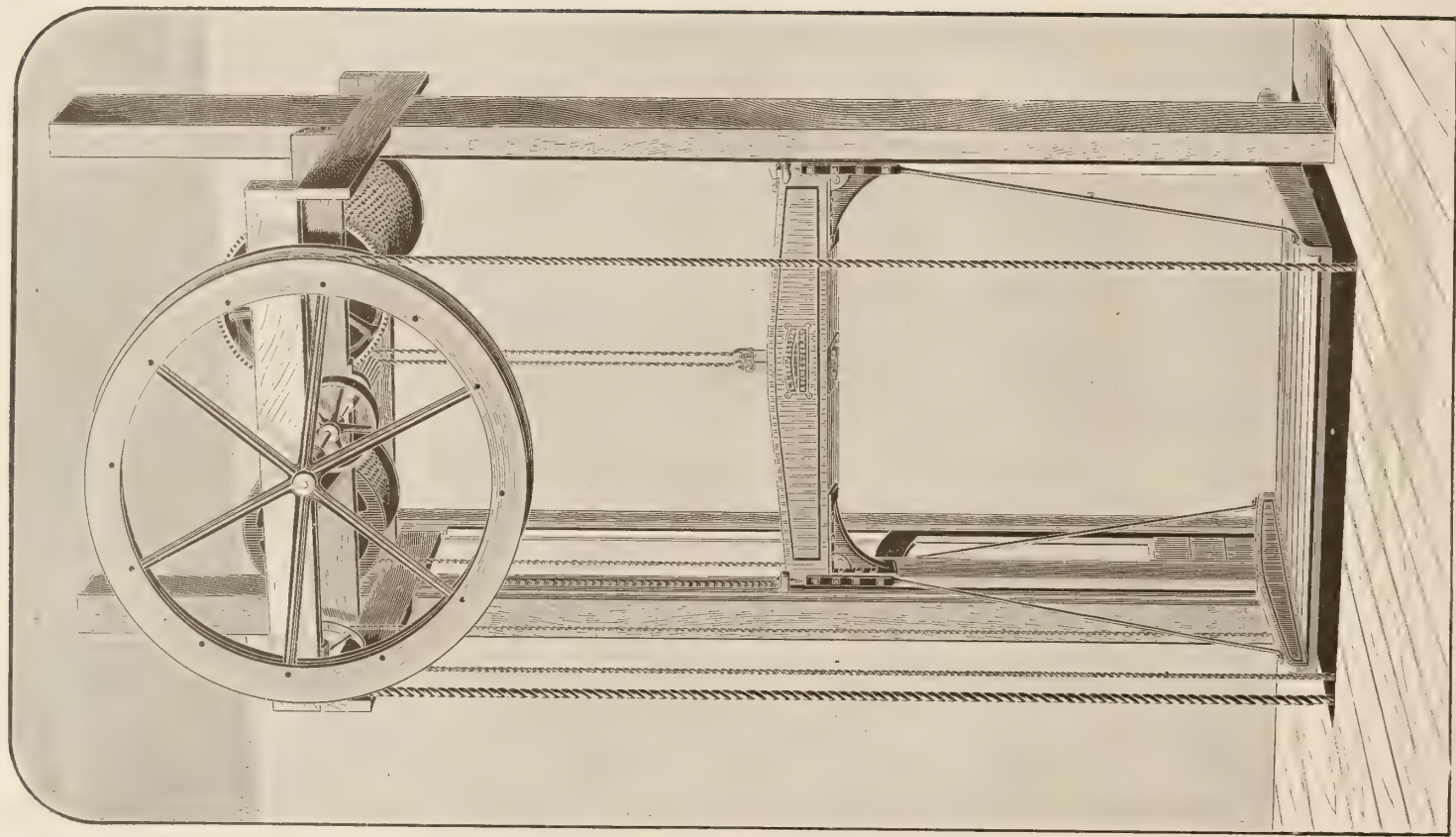
We guarantee strength, material, workmanship and finish of our cars unsurpassed by any other builder.

### **Safety Appliances.**

We use the number and size of patent guideway suitable to capacity of the car.

We use the patent Gravity Safety attached directly to the counterweight, which is absolutely sure of action, no springs being used.

See cut and description of Gravity Safety, page 67.



HAND-ELEVATOR.

## Hand Elevators.

There are many business places requiring the moderate use of an elevator which have not the power for the belt machine, or the water for the hydraulic. In such cases our Improved Hand Elevator comes in as a very desirable substitute.

This cut was made from our Safety Hand Elevator, placed in its ordinary working position, directly over the hatchway, with hoisting and brake ropes inside, so that a person may work it conveniently while riding up and down on the platform.

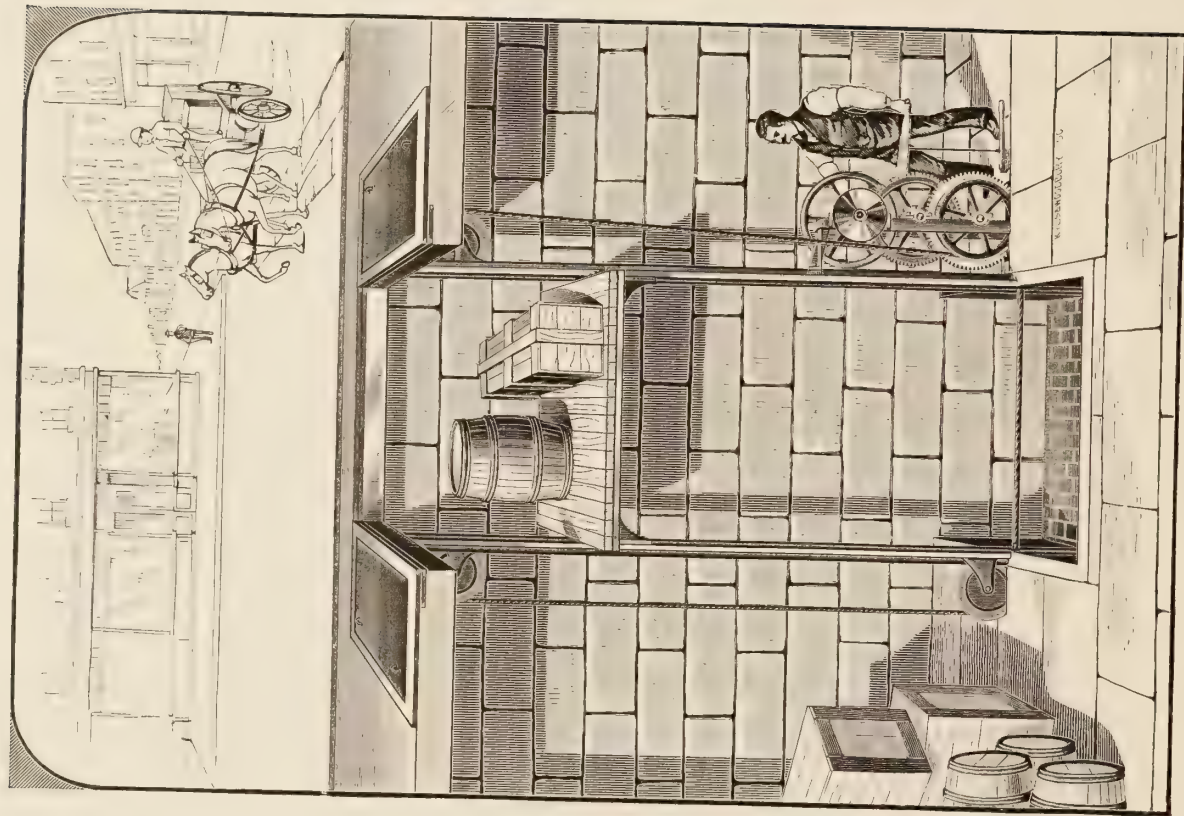
We make special plans and drawings for each and every hand elevator, so that all of the parts, lifting cables, counter-balance weight and pull-ropes, will be situated to suit the size of car, and position most convenient to work.

Our rope wheel is made with iron hub and spokes and light wood rim, which makes a continuous bearing for the rope, and light as possible for stopping quickly. All of the bearings run on our anti-friction rolls requiring no oil, and making the easiest running elevator possible, which is very essential in a hand machine.

We have a complete and perfect brake, not fully shown in the cut, which will hold any load when brought on full, or govern the speed of the load at will when descending. Nothing to get out of order—noiseless and durable. We use the safety car with patent safety guides.

The requirements of hand elevators are various, also the positions in which they are placed. We build all sizes and kinds.

Parties wishing prices will please state the height of travel, size of platform, load to be raised, kind of business, etc.



HAND SIDEWALK ELEVATOR.



## Hand Sidewalk Elevator.

We show opposite a very simple form of elevator for raising or lowering goods from basement or sidewalk by hand power.

We have made and set up many of these hand elevators, but have never shown a cut or advertised them in our catalogue.

This is quite different in construction from the old style of drum and chain machine. We use two wire cables, both coiled around the same drum, and attached to opposite sides of the car, also a speed governor to prevent the load from running down at an unsafe speed.

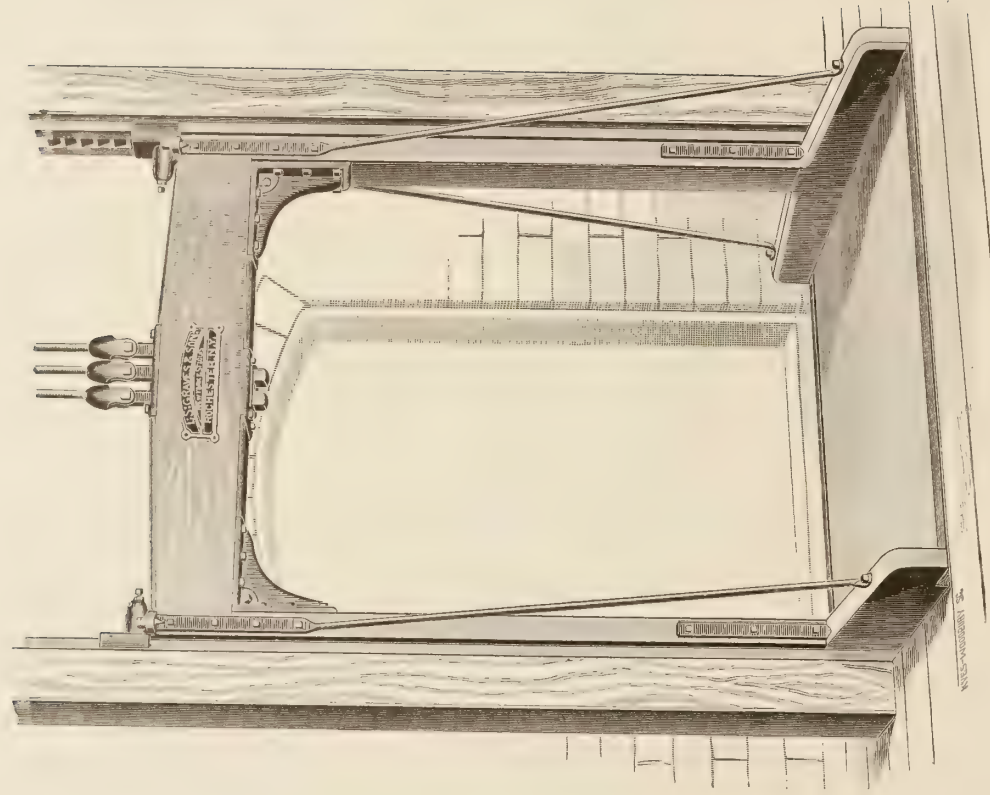
We use heavy cast-iron posts with tops bolted to sidewalk, and bottoms firmly set in masonry. The inside of posts are planed and also the cast-iron bracket-guides attached to the car, which insure a nice running and durable elevator.

## Care of Freight Elevators.

It is surprising that more accidents do not happen to the freight elevator, which is handled by every Thomas and Richard, jerked and pulled, overloaded unmercifully and shamefully neglected.

Insurance companies now come in and offer to take these risks, have them inspected occasionally, and perhaps repaired, which is a good thing.

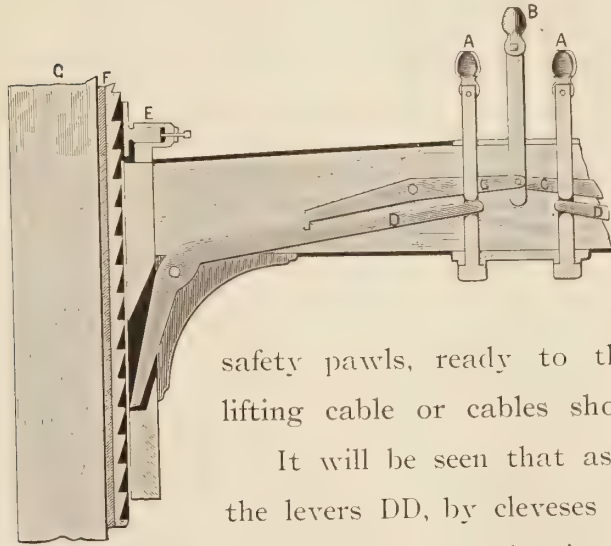
It must be admitted that the elevator has more responsible duties to perform than any other machine, and it should receive the best of care and attention. It should be kept clean and carefully oiled, but not covered with oil, and should be examined often by a good mechanic to see if all parts are working perfectly. The safeties should be tried to see if they are not blocked by rust or rubbish. The cables should be inspected, and if the outside strands are badly worn or broken they should be replaced.



**PLAIN SIDE FREIGHT CAR.**

This cut shows the Plain Side Freight Car as generally used, with the guide-posts at the side, which is the strongest, most durable, and cheapest car we make. We put on a low back when running next to a wall and used only from one side. This car is used either with the spur gear, steel screw or hydraulic machines, made of the best seasoned ash, with hard maple floor, put together with bolts and screws, well ironed and braced, and fitted with patent gravity safety attachments.

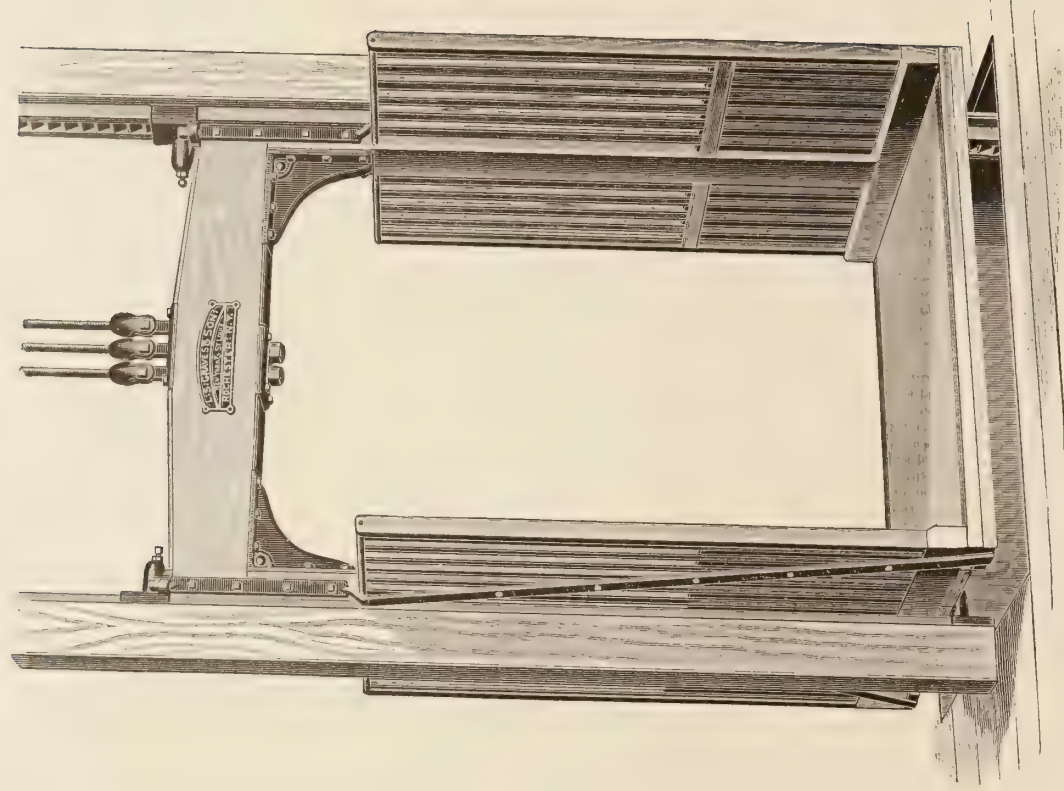
## Patent Gravity Safety.



The above cut shows our direct lever application of the Patent Gravity (or counter-weight) Safety, which we are using on our freight elevators. It consists in making the weight, used to balance the car, serve the purpose of safety also, by attaching it directly to the

safety pawls, ready to throw them out and engage the safety ratchets, if the lifting cable or cables should break or slacken.

It will be seen that as the two lifting cables are connected to extremes of the levers DD, by cleaves AA, and the weight cable to the levers C by cleve B, so long as the lifting cables maintain their hold, they will keep the levers and pawls in the position shown in the cut by the superior weight of the car; but should one or both of the lifting cables break or loose its hold, the counter-weight cable, always ready to act, would instantly throw out the pawls to engage the safety ratchets on the guide-posts, and lock the car firmly to the ratchet guides.



**FREIGHT CAR ENCLOSED ON TWO SIDES.**

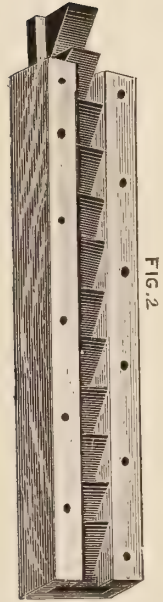
This is another cut of the side freight car with two sides closed in, which is more convenient for some kinds of business.

Should this car go next to a wall, with opening only in front, three sides should be closed in, like car on page 60.

All of our freight cars are made of the best seasoned ash, with maple floors well ironed and braced, and fitted with patent gravity safeties.

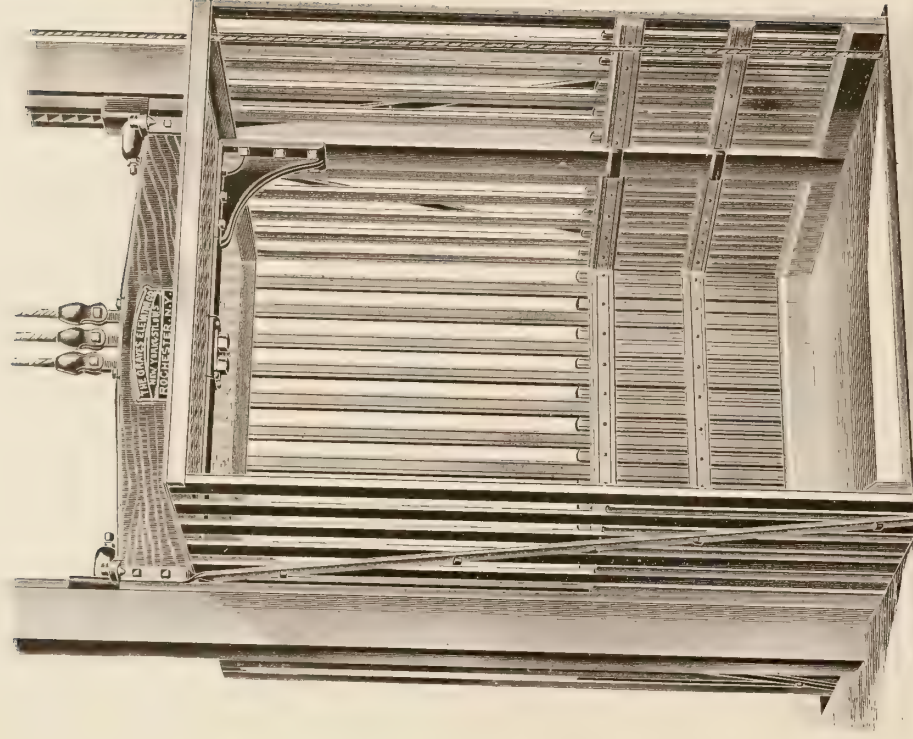


## Patent Safety Guideways, for Freight Elevators.



This little cut shows a section of our Patent Combined Wood and Iron Safety Guide, used mostly on our freight elevators. One object of the wood casing is to provide an even, noiseless guide track for the car, but the principal object is to retain and hold the flanged iron safety ratchets, so they cannot be separated or get out of place, even if they should get broken. The wood casing is grooved from solid selected ash, and the iron ratchets are cast with a flange on the bottom, as shown in the cut, and the wood screwed solid to the guide-posts. The ratchets are also screwed solid, both to the post and the back of guideways, so that if the ratchets should become broken at every tooth, it will do no serious damage, as the car does not depend upon them as guides, and the flange on the ratchets prevents them from separating from the wood. They would remain piled one upon the other, and resist the downward strain in case of accident to the lifting cables.

We have used this guideway on hundreds of elevators, and tested it many times, always with the most satisfactory results.



#### ENCLOSED AND COVERED FREIGHT CAR.

This is the most complete freight car we build, and is often called into passenger service.

Enclosed on three sides with selected ash, is double ribbed, top is covered with heavy wire guards, ironed and braced in a substantial manner, and fitted with safety guideways.

## Operating Factory Elevators.

It is a fact that most of the accidents from the use of freight elevators are not caused by the breaking of machinery or cables, or falling of the cars, as might be supposed, but by the improper construction or guarding of the hatchway and its openings.

The cardinal points or requirements to consider in the purchase or use of an elevator should be as follows:

Elevator to be safely constructed, also extra safety attachments.

Elevator to run at a good economical speed for business.

Elevator to run smooth and free from obstruction.

Protection against the spread of fire up or down hatchway.

Protection against persons falling down hatchway.

Protection against accident by getting on and off moving cars.

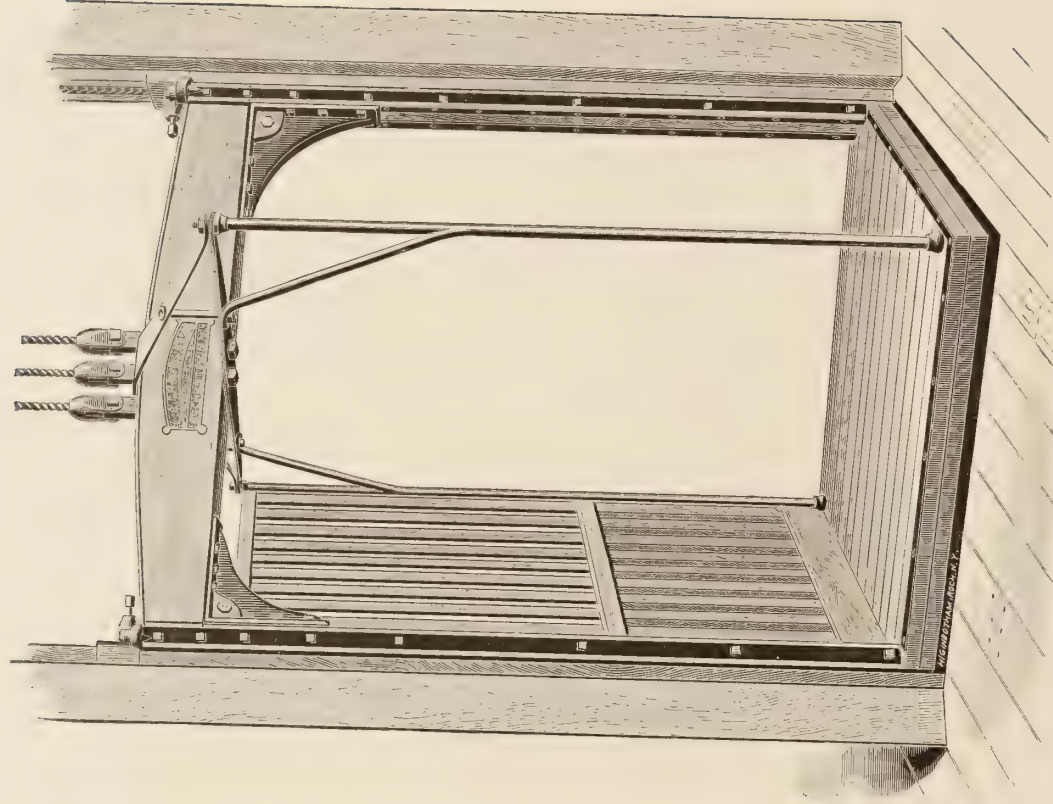
Protection against persons or goods coming in contact with the moving car.

The only way we know of to fulfill these requirements is to run the elevator in a brick enclosed (or wood, lined with tin,) fire-proof shaft.

If the shaft runs up through roof, and is lighted from the top, so much the better.

The elevator doors at each floor should be kept closed, to be opened only from the inside by an attendant on the car.

It should have heavy wire screen panels in the doors for light, ventilation and protection against the spread of fire.



#### CORNER CAR.

This cut shows a medium size Corner Car, with guide-posts at the opposite corners. It is used in many places where it is necessary, from its location in a corner, or the situation being such, that the goods must be entered and discharged from two sides at right angles. The cut shows one side wainscoted. We often enclose two sides with wainscoting or slating, with wire top guards, according to requirements, price, etc. The necessity of bracing the opposite corners with heavy wrought-iron truss frame on top, makes this car more expensive than the side car shown on page 66, yet it is not so strong for merchandise, so we only advise its use when necessary for convenience.



# REFERENCES.

## AKRON, O.

*Hydraulic Freight.*  
Beacon Publishing Co.  
*Steel Screw Freight.*  
Beacon Publishing Co.  
*Geared Freight.*  
Akron Milling Co.  
Seiberling, J. F. & Co., Manufacturers Agricultural Machinery.  
Seiberling Milling Co. (3)

## ALBANY, N. Y.

*Hydraulic Passenger.*  
Del. & Hud. Canal Co., Office Building.  
Lansing, J. T., Office Building.  
Whitney, Wm. & Co., Dry Goods.  
Wooster, B. W., Furniture.  
*Hydraulic Freight.*  
Albany Hardware and Iron Co., Store.  
McClure, Walker & Gibson, Drugs.  
Walker, J. E., Fruits.  
Whitney, W. M. & Co., Dry Goods.  
*Steel Screw Freight.*  
Albany Embossing Co.  
Albany Saw Co.  
Consolidated Car Heating Co.  
Van Bentheusen & Son, Printers.  
*Geared Freight.*  
Albany Saw Co.  
Albany Street Railroad Co.  
Ball & Co.  
Goold, Jas. Co., Mfrs. Carriages. (2)  
McDonald, D. & Co., Gas Meters.  
Page, James, Foundry.  
Wheeler & Milick Co., Agrl. Imp's.  
Wood, W. A., Mower & Reaper Co.  
*Hand Freight.*  
Harris, H. A., Residence.

Taylor, J. T., Store Building.  
Wooster, B. W., Furniture.

## ALBION, N. Y.

*Steel Screw Freight.*  
Curtice Manufacturing Co.  
*Hand Freight.*  
Gates, Sherwood & Co.  
Hart, E. Kirk, Warehouse.  
Royce, J. H., Residence.

## ALEXANDRIA BAY, N. Y.

*Hydraulic Passenger.*  
Crossmon House.

## ALFRED CENTER, N. Y.

*Geared Freight.*  
Celadon Terra Cotta Co.

## ALLENTOWN, PA.

*Steel Screw Freight.*  
Barbour Flax Spinning Mill.

## ALTOONA, PA.

*Geared Freight.*  
Schwarzenbach, Huber & Co., Silk Mill.

## AMSTERDAM, N. Y.

*Hydraulic Passenger.*  
Levi, S. & Co., Hotel.  
*Hydraulic Freight.*  
Warner, DeForest & Co., Warehouse.  
Wendell, Willis, Warehouse.  
Wendell & Becker, Warehouse.

## ASPEN, COL.

*Hydraulic Passenger.*  
Hotel Jerome.

## ATHENS, GA.

*Steel Screw Passenger.*  
Meyers & Co., Store Building.

## ATHENS, PA.

*Geared Elevator.*  
Athens Furniture Co.  
*Hand Freight.*  
Athens Furniture Co.

## ATLANTA, GA.

*Hydraulic Passenger.*  
Chamber of Commerce.  
Grant Office Building.  
Inman Building.  
Marion House.  
Y. M. C. A. Building.  
*Hydraulic Freight.*  
Kiser, Moore, Draper & Co., Shoe Warehouse.  
*Hydraulic Direct Lift.*  
Atlanta Fire Department Headquarters.  
*Hand Freight.*  
Atlanta Fire Department Headquarters.  
Commercial Club.  
DeGive, L., Opera House.  
Southern Medical College.

## ATLANTIC CITY, N. J.

*Hydraulic Passenger.*  
Solomon, I., Hotel.

## AUBURN, ME.

*Hydraulic Passenger.*  
Mineral Springs Hotel.

## AUBURN, N. Y.

*Hydraulic Passenger.*  
Richardson & Son, G. W. Furniture.  
Wheeler, C., Jr., Apartment House.

*Steel Screw Freight.*

Dunn, Barber & Co., Boot Manufactory.

*Geared Freight.*

Auburn Prison, Hollow Ware Manf.

Auburn Prison, New Building.

Dunn & McCarty, Shoe Manfrs.

Jones & Merrith, Foundry.

Osborne, D. M. & Co., Agr'l Imp'ts. (2)

*Hand Freight.*

Alliger, C. B., Business Block.

Hollister & Noble, Boots and Shoes.

Shimer, A., Hotel.

Smith, D. A., Hardware. (2)

Smith Bros., Livery.

Tallman, J. K., Livery and Undertaker.

Weeks, Cossum & Co., Paper.

## AUGUSTA, GA.

*Hydraulic Passenger.*

Masonic Temple.

*Hydraulic Freight.*

King, J. P.

*Hand Freight.*

Augusta Chronicle, The

## BALDWINSVILLE, N. Y.

*Hand Freight.*

Hall & Williams, Hardware.

## BALLSTON, N. Y.

*Hand Freight.*

Finley, P. A., Furniture.

## BALTIMORE, MD.

[These elevators were put up by Jas. Bates, Baltimore; the machinery furnished by us.]

*Hydraulic Passenger.*

Albion Hotel.

Bachrach & Bros., Photographers.

Blake, Dowell & Helm, Who. Millinery.

Brensch, I., Installment House.

Brooks, Jenkins & Hutchinson, Notions.

City Record Office.

Griffith, G. S. & Co., Carpets.

Hall, Homes & Heddington, Carpets.

Hecht, S. Jr., & Son, Carpets.

Home for the Aged.

Homer, J. A. & Co., Notions.

Kohn, B., & Co., Notions.

Lauchrimer & Son, Clothing.

Lyon, Hall & Co., Carpets, etc.

Maryland Fire Insurance Co.

Nat. Marine Bank, Office Building.

Peoples' Installment Co.

Record Office and Orphans' Court.

Rosenfield Bros., Clothiers.

St. James Hotel.

Simon, C., & Son, Laces, etc.

Union Protestant Infirmary.

Welsh Bros., Jewelry.

Witz, Levi, Residence.

Women's College.

*Hydraulic Freight.*

Alnut, Nixon & Goldsboro, Boots and Shoes.

Ammidon & Co., Tin Plates.

Bates, James.

Bristor, C. E., & Bro., Hardware.

Clendennen Bros., Plumbers' Supplies.

Day, Jones & Co., Saddlery and Trunks.

Denny & Mitchell, Livery. (2)

Egerton, E. S. & Co.

Ellis, Bangert & Co., China Ware.

Frank, N. & Sons, Paper Stock.

Freidenwald, Jos.

Goldberg Bros., Dry Goods.

Graham, G. B., Warehouse. (3)

Griffin & Mannion, Livery Stable.

Hetzell, J. G., Galvanized Iron Works.

Hollander, C. & Son, Furniture.

Hooper, W. E. & Sons, Cotton Duck Co.

Hopper & Eaton, Grocers.

Keidel, H., & Co., Who. Hardware.

Keyser Bros.

Kibbey, W. B., Estate

King, H. S., & Sons, Who. Hardware.

Leopold, J., & Co., China and Glass.

Lincoln, W. R., Furniture.

McCullough, J. G., Estate.

Moultain Bros., Wholesale Notions.

Norris, Vèy & Co., Carriage Goods.

Oppenheim, Oberndorf & Co.

Pain, C. C., Com. Building

Powell, W. P., & Co., Who. Grocers.

Prag, H., & Bro.

Prag, H. & Bro.

Prior & Hilgerberg, Toys.

Riemaus, J. H.

Rouse, Hempstone & Co., Who. Notions.

Safe Deposit Co.

Schluenes, A., & Co., Cloths, etc.

Sharp & Dohme, Druggists.

Sinsheimer, Lewis, Wholesale Flour.

Sneeringer & Co., Tobacco.

Spraggins, Stover & Chaddock, Boots & Shoes.

Steifel, Guhn & Cohn, Shirt Mfrs.

The Ulman Goldsborough Co., Distillers.

Tyler, G. K.

Ulman, Boykin & Co., Distillers.

Walter, R., & Sons, Clothing.

White, S., & Co., Hats, etc.

White, Welcome, Bakery.

Woodward, Baldwin & Co., Cotton Duck.

*Steel Screw Freight.*

Herrings, O., Son Co., Carpets, etc.

Rogge & Koch, Who. Toys.

*Geared Freight.*

Boston Dry Goods House.

Brush Electric Co., Power House.

Maryland State Tobacco Warehouse. (2)

Graham, G. B., Storage Warehouse.

Wooldridge, R. A., & Co.

## BANGOR, ME.

*Hydraulic Passenger.*

Columbia Office Building.  
Oaks & Chandler, Furniture.  
Prescott, C. C., Furniture.

*Hydraulic Freight.*

Parkhurst, J. F., & Son, Hardware.

## BAR HARBOR, ME.

*Hydraulic Passenger.*

Porcupine Hotel.

## BATAVIA, N. Y.

*Hydraulic Passenger.*

Washburn House.

*Steel Screw Freight.*

Armstrong, D. & Co., Shoe Mfrs.  
Wiard Plow Co. (2)

*Geared Freight.*

Batavia Clamp Co.  
Batavia Preserving Co., Cannery.  
Batavia Wheel Co.  
Johnston Harvester Co. (2)

*Hand Freight.*

Fonda, J. B., Hardware.  
N. Y. S. Institute for the Blind.  
Parsons, J. B., & Son, Produce.  
Shultz, J. C., Grocer.  
St. James Hotel.  
Wiard Plow Co.

## BATCHELLERVILLE, N. Y.

*Geared Freight.*

DeGolla, E. L., Washboard Mfr. (2)

## BATH-ON-THE-HUDSON, N. Y.

*Hand Freight.*

Bates, O. W., Storage Warehouse.

## BELLEVILLE, N. J.

*Steel Screw Freight.*

DeWitt Wire Cloth Co.

## BERLIN, CT.

*Hand Freight.*

Old Ladies' Home.

## BETHLEHEM, PA.

*Steel Screw Freight.*

Cutter, J. D., Mercantile Building.

*Geared Freight.*

Cutter, J. D., Mercantile Building.

## BINGHAMTON, N. Y.

*Hydraulic Passenger.*

Crandall House.  
Hotel Bennett.  
Ross, E., Office Building.  
Strong, Cyrus, Jr., Office Building.  
Wescott, H., Office Building.

*Hydraulic Freight.*

Kent, Geo. A., Com. Building.

*Steel Screw Freight.*

Bennett Mfg. Co., Overall Mfrs.  
Stone, Goff & Co., Boot Mfrs.

*Geared Freight.*

Noyes, J. P., Warehouse. (2)

*Sidewalk Elevator.*

Doubleday, A., Store Building.  
Dunk, Alfred, Store Building.  
Perry, I. G., Store Building.

## BIRMINGHAM, ALA.

*Hydraulic Freight.*

Thompson-Houston Electric Company, Store Building.

## BLOOMFIELD, N. J.

*Geared Freight.*

Beckett & McDowell, Foundry.

## BLOOMINGTON, ILL.

*Hand Freight.*

Brand, Geo. & Co., Furniture.

## BLUE MOUNTAIN LAKE, N. Y.

*Hydraulic Passenger.*

Prospect House.

## BOSTON, MASS.

*Hydraulic Passenger.*

Adams House. (2)  
Allen, Willis B., Residence.  
Am. Protective League, Office Building.  
Bedell, N. G., Apartment House.  
Charlesgate Hotel.  
Clark, B. C., Residence.  
Crocker, Mrs. W. B., Millinery.  
Cushing Estate, Office Building.  
Franklin Bank Building.  
Grace, J. J., Commercial Building.  
Hamlin, N. P., Office Building.  
Hathaway Estate. (2)  
Hotel Beacon.  
Hotel Bristol. (2)  
Little A. M., Apartment House.  
Mfrs. Nat. Bank Building.  
Mass. New Church Union.  
Mass. Real Estate Co., Office Building.  
Rotch, Dr. T. M., Residence.  
Shuman, A. & Co., Mercantile Bldg. (3)  
Smith & Porter, Mercantile Building.  
Tremont Nat'l Bank, Office Building.  
Walker, B. P., Apartment House. (4)  
Whitney, Ellerton P., Office Building.

*Hydraulic Freight.*

Adams House.  
Boyleston Estate, Office Building.

Hall Block.  
 Hardy, A. Estate.  
 Hotel Beacon.  
 Little A. M. Apartment House.  
 Palmer, Parker & Co., Mfg. Buildings.  
 Pearson Cordage Co.  
 Raynor, Estate.  
 Shuman, A. & Co., Mercantile Bldg.  
 Swift Brothers, Dressed Beef. (2)  
 Wait & Bond, Factory Building.

*Electric Passenger.*

Bay State Real Estate Ass'n, Office Bldg.

*Steel Screw Passenger.*

Carter, H. H. & J. R.  
 Eldridge, James T.  
 Wales, T. B., Estate.

*Steel Screw Freight.*

Bradley, Ira, Commercial Building.  
 Carter, H. H., Mercantile Building.  
 Carter, Rice & Co., Paper. (2)  
 Goldthwait, John, Carpets. (3)  
 Jones, L., & Son, Stable Building.  
 Lockwood Manufacturing Co.  
 Loring, C. W. & A. P., Store Building.  
 Peck, Wm. G.  
 Sears, J. M., Store Building.  
 Smith & Porter, Mercantile Building.  
 Willard & Dilloway, Com. Building.

*Gear Freight.*

Cotting, C. U.  
 Smith & Engle, Brewers.  
 Williams, John D., Imported Wines.

*Hand Freight.*

N. E. Tel. & Tel. Co., Warehouse. (2)  
 Walker, B. P., Apartment House. (2)

*Direct Lift Hydraulic.*

Carter, Rice & Co., Paper.  
 Fay, F. L., Estate.  
 Fenno, J. B., Store Building.

Fletcher, J. V., Quincy Market.  
 Hotel Beacon.

BOUCKVILLE, N. Y.

*Gear Freight.*

Peet Bros., Cider Mill.

BRANDON, VT.

*Hydraulic Passenger.*

Lake Dunmore House.

BRANTFORD, ONT.

*Gear Freight.*

Harris, A., Agricultural Machinery,

BRIDGEPORT, CT.

*Hydraulic Passenger.*

Connecticut National Bank.

*Electric Screw Passenger.*

Barnum, P. T., Estate.

*Steel Screw Freight.*

Bullard, E. P., Machine Tools.  
 Burns, Silver & Co.  
 Holmes & Edwards Silver Co. (3)  
 Standard Association.

*Gear Freight.*

Bridgeport Chain Co., Factory Bldg.  
 Bridgeport Malleable Iron Co.  
 Eaton, Cole & Burnham, Brass Finishers. (4)  
 Holmes & Edwards Silver Co.  
 Hotchkiss, E. S., Factory Building.  
 Ray, H. B.  
 Warren Bros., Corsets.  
 Wheeler & Co., Wholesale Grocers.

BRIGHTON, MASS.

*Gear Freight.*

New England Meat and Wool Co.

BROCKPORT, N. Y.

*Steel Screw Freight.*

Moore-Shaffer Shoe Co.

BROOKLYN, N. Y.

*Hydraulic Passenger.*

Cowperthwait Furniture Co.  
 Home for the Aged.  
 Howe's, R. M., Son, Furniture.  
 Johnson Brothers, Who. Grocers. (3)  
 Johnson Brothers, Office Building. (2)  
 Lattimer, B. G., Carpets.  
 Packer, Mrs. W. S., Residence.  
 Phelps, E., "Westend" Apartment House.  
 St. Mary's Hospital.  
 St. Peter's Hospital.  
 Thompson, W. O., Apartment House.  
 Vosburg Mfg. Co., Gas Fixtures.  
 Weil, H., "Berkley" Apartment House.  
 Weil, H., "Grosvenor" Apartment House.  
 Zeigler, W., "Montague" Apartment House.

*Hydraulic Freight.*

Cowperthwait Furniture Co.  
 Jennings, A. G., Lace Mills.  
 Johnson Bros., Grocers.  
 St. Peter's Hospital. (2)

*Steel Screw Freight.*

Brooklyn Furniture Co. (3)  
 Burns, Jaliz & Sims, Factory Building.  
 Cole, Frank, Foundry.  
 Cowperthwait, F., Rattan Furniture.  
 Engle & Zimmerman, Builders.  
 Hauselt, Chas. (2)  
 Hurliman, J. G., Mfg. Building.  
 Ilsley, S. A. & Co., Metal Boxes. (2)  
 Kayser, J., Factory Building.  
 Keeler, J. E., Carpets.  
 Lane, William.  
 Lang, Max, Furniture. (Pass. Car)



Levy, F. H., & Co., Factory Building.  
Mason, Au. & Zollinger, Candy Mfrs. (2)  
N. Y. Enamel Paint Co.  
Pacific Tucking Co.

Palmer Manufacturing Co.  
Parsons, James, Shoe Manufacturer.  
Radcliff & Vernon. (2)  
Reliable Steam Power Co.  
Somers Bros., Fancy Boxes.  
Thomas & Co., Shoe Mfrs.  
Tiebout, C. H.

Tuttle, S., Sons Co., Dry Goods  
Union Rattan Co.  
Worn, M., & Sons, Cabinet Ware.  
Young, Peter, Furniture Manf'y.

*Geared Freight.*

Andrews-Demarest Seat Co.  
Anheuser-Busch Brewing Co.  
Brooklyn White Lead Co.  
Curley, J., Carriage Mfrs. (2)  
Grauers, G., Brewery.  
Homer, F., Brewery.  
Hosch, Fred, Factory. (2)  
Jennings, A. G., Lace Mill. (3)  
Kavanaugh, M.  
Levy, A. & Co., Storage Warehouse.  
Loader, Joseph.  
Mason, Isaac, Furniture.  
Mergenthaler Linotype Co.  
N. Y. Cotton Oil Co  
Reliable Steam Power Co. (2)  
Ronalds & Co., Factory Bldg. (2)  
Scheibler, G. W., Silver Ware Manfr.  
Shadboldt Mfg Co., Wagon Manfrs. (2)  
Simpson, J. S. & G. F., Factory Bldg. (4)  
Smith, M. F., Storage Warehouse.  
Somers Bros., Fancy Boxes. (3)  
Taussig, N. W. & Co., Sugar Wash. (2 steam.)  
Thomas & Co., Shoe Mfrs.  
U. S. Navy Department. (2)  
Vernon, S. E. & M., Factory Building. (2)

Wiedman, Paul, Brewery Building.  
Wiessner, O. E. A., Factory. (2)  
Williams, J. H., & Co.  
Worn, M. & Sons, Cabinet Ware.  
Yeoman, D. L.

*Hand Freight.*

Hinrich, C. F. A., Residence.  
Jennings, A. G., Lace Mills.

*Hydraulic Direct Lift.*

Johnson Bros., Office Building.

BUENOS AYRES, S. A.

*Geared Freight.*

Fehling, G., Carriage Factory.

BUFFALO, N. Y.

*Hydraulic Passenger.*

Georger, J. W., Furrier.  
Hotel Broezel.

*Hydraulic Freight.*

Shoellkopt, J. F., Commercial Building.  
Shepard, Sidney & Co., Hardware.  
Wex, L., Commercial Building.

*Steel Screw Freight.*

Hardwicke & Ware, Steam Fitters.  
Seeger, John G., Furniture.

*Geared Freight.*

Bingham & Taylor, Foundry.  
Buffalo Forge Co.  
Buffalo Hammer Co.  
Buffalo School Furniture Co.  
East Buffalo Iron Works.  
Hager & Feist, Sash and Blind Factory.  
Hardwicke & Ware, Steam Fitters.  
Hamilton, C. J., Sash and Blind Factory.  
Jones, F. P. & Co.  
Jones, G. H., Sons, Iron Works. (2)  
Kingston, J. C., Last Factory.  
Ovens, R. & Co., Bakery.

Pitts' Agricultural Works. (2)  
Shepard, Sidney & Co., Hardware.  
Weisbauer Mfg. Co., Plush Cases.

*Hand Freight.*

Daws, H. J., Residence.  
Lorenz, John, Paints and Oils.  
Niagara Storage Co.  
Oaks, J. A. Restaurant. (3)  
Smith, J. H., & Son, Warehouse.

*Direct Lift Hydraulic.*

Hotel Broezel.  
Palace Laundry.

*Sidewalk Elevator.*

Georger, J. W., Furrier.  
Seeger, John G., Furniture.  
Wex, L., Commercial Building.

BURLINGTON, VT.

*Hydraulic Freight.*

Wells & Richardson Co., Drugs. (2)

*Hand Freight.*

Arbuckle & Co., Tobacco.

BUTLER, PA.

*Steel Screw Freight.*

Klinger, H. J., & Co., Rolling Mill.

CALEDONIA, N. Y.

*Hand Freight.*

Cameron & Munzie  
Walker & Wilkinson, Agr'l Implements.

CANAJOHARIE, N. Y.

*Steel Screw Freight.*

Canajoharie Shirt Co.

CANANDAIGUA, N. Y.

*Hydraulic Passenger.*

Canandaigua Hotel.

## THE GRAVES ELEVATOR COMPANY, ROCHESTER, N. Y.

*Geared Freight.*  
Smith, W. M., & Co., Bakery.

*Hand Freight.*  
Cooley, J. S., & Son, Hardware.  
Grant, H. B., Hardware.

CANISTEO, N. Y.  
*Steel Screw Freight.*  
Allison, Boot and Shoe Co.

CAPE MAY, N. J.  
*Hydraulic Passenger.*  
Tracy, John, Hotel.

CAPE VINCENT, N. Y.  
*Geared Freight.*  
Cleveland, A. B. Co., Seeds. (2)  
Howard & Underhill, Seeds.

*Hand Freight.*  
Cleveland, A. B. Co., Seeds.

CARBONDALE, PA.  
*Hydraulic Direct Lift.*  
N. Y. O. & W. R. R. Co., Depot.

CARLETON, N. Y.  
*Hand Freight.*  
Selheimer & Beckwith, Grain.

CATO, N. Y.  
*Hand Freight.*  
Mehan, Jas., Tobacco.

CHAPPAQUA, N. Y.  
*Steel Screw Freight.*  
Chappaqua Shoe Co.

CHARLOTTE, N. Y.  
*Steel Screw Freight.*  
Fitzgerald, J. M., Shoe Manufacturer.

CHAUNCY, N. Y.  
*Hand Freight.*  
Brussels Tapestry Co.

CHAUTAUQUA LAKE, N. Y.  
*Hydraulic Passenger.*  
Athenum Hotel.  
Grand Hotel.

CHICAGO, ILL.  
*Hydraulic Freight.*  
Ellithorpe, A. C., Warehouse.

*Steel Screw Freight.*  
Ellithorpe, A. C. (3)

*Geared Freight.*  
Ellithorpe, A. C.,

CHURCHVILLE, N. Y.  
*Hand Freight.*  
Stone & Briscoe, Store Building.

CLEVELAND, O.  
*Hydraulic Passenger.*  
Beckman Building, Offices.  
Clarence, John Hey, Office Building.  
Weddell House

*Hydraulic Freight.*  
Clarence, John Hey, Office Building.  
Miller Bros., Commercial Building.

*Steel Screw Freight.*  
Standard Sewing Machine Co. (2)  
Morgan, W. J., & Co., Lithographers.  
Sherwin-Williams Co., Paints and Oils.  
Southwick, W. P., Grocer.  
Taylor & Bogis Foundry Co.

*Geared Freight.*  
Brush Electric Light Co.  
Cleveland Baking Co. (2)

Cleveland Foundry Co.  
Cleveland Malleable Iron Co.  
Deiterich, E. F., Oils.  
Eberhard Mfg. Co., Hardware. (2)  
Prospect Machine & Engine Co  
Sherwin-Williams Co.

*Hydraulic Direct Lift.*  
Weddell House.

CLIFTON SPRINGS, N. Y.  
*Hydraulic Passenger.*  
Clifton Springs Sanitarium.

*Steel Screw Passenger.*  
Clifton Springs Sanitarium.

COLCHESTER, CT.  
*Geared Freight.*  
Bannigan, James, Rubber Goods.

COLLEGE POINT, N. Y.  
*Steel Screw Freight*  
Klienert, J. B., Rubber Works.

COLUMBUS, GA.  
*Hand Freight*  
Orr, J. K., & Co., Who, Boots and Shoes.

COMMUNITY, N. Y.  
*Hand Freight.*  
Oneida Community, Lim. (2)

CONCORD, N. H.  
*Hydraulic Passenger.*  
Concord & Montreal R. R. Co., Office Bldg.  
Eagle and Phoenix Hotel.  
Republican Press Association.

*Hydraulic Freight.*  
St. Paul School.

*Hand Freight*  
St. Paul School. (5)

## CORNING, N. Y.

*Hydraulic Passenger.*

Williams, H. B., Dry Goods.

*Hydraulic Freight.*

Darrin, J. W., Furniture.

*Hand Freight.*

Rettig, Val., Bottler.

## CORTLAND, N. Y.

*Hydraulic Freight.*

Wallace, D. F., Stationery.

*Steel Screw Freight.*

Cortland Harness &amp; Carriage Goods Co.

## DALLAS, TEX.

*Geared Freight.*

Dallas News.

Keiting Implement Co.

## DANBURY, CT.

*Steel Screw Freight.*

Hill, S. R.

## DANVILLE, ILL.

*Hydraulic Passenger.*

Ætna House.

St. Elizabeth Hospital.

## DANSVILLE, N. Y.

*Hydraulic Passenger.*

Jackson, Dr., Sanitarium.

*Steel Screw Freight.*

Whitman Paper Mills. (2)

*Hand Freight.*

Jackson, Dr., Sanitarium.

## DAYTON, O.

*Hydraulic Passenger.*

Mayer, Wm. Books.

*Steel Screw Freight.*

Callihan, W. P., (Pass Car.) Com. Bldg.

*Geared Freight.*

Callihan, W. P., Commercial Building.

Dayton Malleable Iron Co. (2)

Lowe Brothers, Mfrs. Paint.

## DENVER, COL.

*Hydraulic Passenger.*

Albany Hotel.

Barth, Wm., Office Building.

*Hydraulic Freight.*

Albany Hotel.

Burks, Conforth, Fruits.

Lyon, W. H., Mercantile Buildings. (2)

## DETROIT, MICH.

*Hydraulic Passenger.*

Detroit Picture Co.

Gies' European Hotel.

Hodges Bros., Office Bldg.

Phelps, D. S., Co., Furniture.

*Steel Screw Passenger.*

Detroit Picture Co.

The Griffin House

VanBaalen, I., Clothing.

*Steel Screw Freight.*

Barnum, E. T., Wire Works.

Detroit Machine Screw Works.

Diamond Match Co., Factory. (2)

Hammond, Standish &amp; Co.

Michigan Wire &amp; Iron Works. (2)

Parke, Davis &amp; Co. (2)

Sievers &amp; Erdman, Mfrs. Carriages. (2)

Wright, Wm., Co., Perfumers.

*Geared Freight.*

Boydell Bros., Paint Manfrs.

Detroit Machine Screw Co.

Eaton, T. H., &amp; Son, Mfrs. Chemicals. (2)

Holliday, W. P., Paper Box Mfr. (2)

Ideal Mfg. Co., Factory Bldg.

Peninsular Stove Co. (4)

Webb, Standish &amp; Co., Storage Warehouse.

*Hand Freight.*

Barnard, Mrs. Cath.

Dupont, Peter.

Safety Furnace Pipe Co.

Snow, H. M., Stable.

*Hydraulic Direct Lift Freight.*

Peninsular Stove Co.

Telephone Building.

## DOLGEVILLE, N. Y.

*Hydraulic Freight.*

Dolge, Alfred, Felt Manufacturer.

*Steel Screw Freight.*

Dolge, Alfred, Felt Manufacturer.

*Geared Freight.*

Dolge, Alfred, Felt Manufacturer. (2)

*Hand Freight.*

Faville, W. H., Hardware.

## EAST CAMBRIDGE, MASS.

*Hydraulic Freight.*

Squire, J. P., &amp; Co., Packers. (2)

## EAST ORANGE, N. J.

*Hand Freight.*

Condit, O. E., &amp; N. E.

## EASTON, PA.

*Hydraulic Passenger.*

Easton Trust Co., Office Building.

*Hydraulic Freight.*

Drakes, I., Sons Co., Who. Grocers.

*Steel Screw Freight.*

Daub, Wm. J., Furniture. (Pass.)

Easton Boot & Shoe Co. Matthewan Felting Co.	ERIE, PA. <i>Hydraulic Passenger.</i> Downing, J. F., Office Building. (2) Reed House. <i>Hydraulic Freight.</i> Downing, J. F., Office Building. <i>Steel Screw Freight.</i> Crouch Bros., Millers. Mauer Confectionery Mfg. Co. <i>Geared Freight</i> Nagle, T. M., Engine Works. Sands, W. J., Bakery. Stearns Mfg. Co., Mill Machinery.	FORT EDWARD, N. Y. <i>Geared Freight.</i> Glens Falls Paper Mill Co. Potter & Durkee, Factory.
EATON RAPIDS, MICH. <i>Hand Freight.</i> Hale, Morris, Sanitarium.		FORT PLAIN, N. Y. <i>Hydraulic Passenger.</i> Clinton Liberal Institute.
ELIZABETHPORT, N. J. <i>Steel Screw Freight.</i> Elizabethport Cordage Co. <i>Geared Freight.</i> Morse, L. L., & Son.		FORT WAYNE, IND. <i>Hydraulic Passenger.</i> Masonic Temple. <i>Hydraulic Freight.</i> Fisher Bros., Mfrs. Paper Boxes. Siemon, R., Store Building.
ELMIRA, N. Y. <i>Hydraulic Passenger.</i> N. Y. S. Reformatory. (3) Rathbun House. <i>Hydraulic Freight.</i> N. Y. S. Reformatory. <i>Steel Screw Freight.</i> Richardson, J., Shoe Manufacturer. (2) State Reformatory Shops. <i>Geared Freight.</i> Chemung Hollow Ware Works. Nicks, J. I., Tobacco State Reformatory Shops. Tompkins, Fassett & Crocker, Who. Grocers. <i>Hand Freight.</i> Gleason, E. B., Sanitarium. Grumme, E., Furniture. State Reformatory Boiler House. State Reformatory Dining Room.	FAIRHAVEN, WASH. <i>Hydraulic Passenger.</i> Fairhaven Hotel. FAIRPORT, N. Y. <i>Geared Freight.</i> DeLand & Co., Saleratus. (2) Morduff, A. F., Confectionery. The P. Cox Shoe Co. <i>Hand Freight.</i> Newman & Howe, Grocers.	FORT WORTH, TEX. <i>Hydraulic Freight.</i> Fakes & Co., Furniture. <i>Steel Screw Passenger.</i> Stratton & White. <i>Geared Freight.</i> Hoffman Implement Co.
EL PASO, TEX. <i>Hydraulic Passenger.</i> Hotel Vendome. Sheldon, L. M., Office Building.	FALL RIVER, MASS. <i>Hydraulic Passenger.</i> City Hall Building. Mellen House. <i>Hydraulic Freight.</i> Hyde, Samuel. Mellen House. <i>Sidewalk Elevator.</i> Globe Street R'y Co., Barn. FARMER VILLAGE, N. Y. <i>Geared Freight.</i> Covert, E. & J. C., Harness Mfrs.	FOWLERVILLE, N. Y. <i>Hydraulic Freight.</i> Smith, H. E. FREDONIA, N. Y. <i>Hydraulic Passenger.</i> Fredonia Hotel. GALVESTON, TEX. <i>Hydraulic Passenger.</i> Texas State University. <i>Geared Freight.</i> Clarks & Courts, Printers. <i>Hand Freight.</i> Texas State University.



GARFIELD, N. J.  
*Gear'd Freight.*  
Fritsche Bros., Perfumers.

GENESE, N. Y.  
*Hand Freight*  
Butterway, A. W., Furniture.  
Craig & Knowles, Coal.  
Keys, B. W.  
Livingston Connty Insane Asylum.  
Youngs, E., Hardware.

GENEVA, N. Y.  
*Hydraulic Passenger.*  
Hygienic Institute.  
*Gear'd Freight.*  
Phillips & Clark Stove Co.  
*Hand Passenger.*  
DeLaney, J. P., Residence.  
*Hand Freight.*  
Dorchester & Rose, Hardware.  
Dunn & Hill, Furniture.  
Keyes, B. W., & Son, Carriages.  
Prouty Building

GENORA, N. Y.  
*Hand Freight.*  
Genora Mfg. Co.

GLENS FALLS, N. Y.  
*Steel Screw Freight.*  
Glens Falls Paper Co.  
*Gear'd Freight.*  
Glens Falls Paper Co. (2)  
*Hand Freight.*  
Wilmarth, C. M., Furniture.

GLOVERSVILLE, N. Y.  
*Hydraulic Passenger.*  
Darling & Bard, Furniture.  
Hotel Gross.  
*Steel Screw Freight.*  
Booth & Co., Tanners. (2)

GOUVENEUR, N. Y.  
*Gear'd Freight.*  
Van Duzee Mfg. Co.

GRAND RAPIDS, MICH.  
*Steel Screw Freight.*  
Berkey & Gay Furniture Co.

GREENPOINT, L. I.  
*Gear'd Freight.*  
Logan Farrel & Co., Boiler Makers.

GREEN SPRINGS, O.  
*Steel Screw Passenger.*  
Oak Ridge Sanitarium.

HAGAMAN'S MILLS, N. Y.  
*Gear'd Freight.*  
Pawling, H., Knit Goods.  
Pawling, Wm., Knit Goods.  
*Hand Freight.*  
Pawling, Wm., Knit Goods.

HAGERSTOWN, MD.  
*Hydraulic Freight.*  
Bloom, S. M., & Co.

HARRISBURGH, PA.  
*Gear'd Freight.*  
Hickok, W. O., Manufacturing Co.

HARRISON, N. J.  
*Hydraulic Direct Lift.*  
Norwich Insulated Wire Co.

HARTFORD, CT.  
*Hydraulic Passenger.*  
Brown & Thompson, Office Building. (2)  
Hawley, Goodrich & Co., "Hartford Courant."  
Hartford County Court House.  
Phoenix Insurance Co., Office Building.  
Seidler & May, Furniture.  
Wander, W., & Son, Pianos.  
*Hydraulic Freight.*  
Blair, C., Commercial Building.  
Seidler & May, Furniture.

*Steel Screw Freight.*  
Hartford Trust Co., (Passenger)  
Hawley, Goodrich & Co., "Hartford Courant."  
Kibbe & Robinson, Grocers.  
Mead, J. C., Architect and Builder. (2)  
Pitkin Bros., & Co., Mfrs. Boilers, etc.  
Smith & Bourn, Saddlers.  
Williams & Carleton.  
*Gear'd Freight.*  
Hartford Machine Screw Co.  
Jewell Belting Co.  
*Hand Freight.*  
Bronson & Fitzgerald, Provisions.  
Fisher, Paper.  
Macy Bros., & Co., Boots and Shoes.  
Prison Buildings. (2)  
Sill, G. J., Paper Stock.  
*Hydraulic Direct Lift.*  
New England R. R. Co., Depot.

HARTSVILLE, N. C.  
*Gear'd Freight.*  
Carolina Fibre Co.

HAVANA, CUBA.  
*Steel Screw Passenger.*  
Hotel Pasaje  
Silcox, G. W. (2)  
*Hand Freight.*  
Estrada, J., Cigar Factory.

HAVERHILL, MASS.  
*Hydraulic Passenger.*  
Daggett, B. A., Office Building.  
*Hand Freight.*  
Haverhill City Hospital.

HELSINBORG, SWEEDEN.  
*Steel Screw Freight.*  
Helsinborgs, Gummifabriks, Aktiebolag.

HERKIMER, N. Y.  
*Steel Screw Freight.*  
Horrock, Wm., Furniture Mfr.

- Mark, Morris, Knitting Mill.  
Quackenbush, H. M., Hardware Specialties.  
Standard Furniture Co. (2)  
*Geared Freight.*  
Geisey, Roberts & Co. (2)
- HOBOKEN, N. J.  
*Steel Screw Freight.*  
Algero, A., Factory.  
Cordes, F., Dry Goods.  
Evening News.  
Schwarzenbach & Huber Co., Silk Mill.  
*Geared Freight.*  
McLaren, J., Caskets.
- HOLYOKE, MASS.  
*Hydraulic Passenger.*  
Delaney, James, Hotel.  
*Hydraulic Freight.*  
Chase & Coolidge, Mill Supplies.  
Clough, J. A., Mercantile Building.  
Flannigan, T. J., Who. Liquors.  
Judd Paper Co.  
Metcalf & Luther, Furniture.  
Nightingale, Geo., Paper.  
Octo, Frank, Furniture.  
Phelps & Tower, Stoves.  
Swift Bros., Dressed Beef.  
Sterns Paper Co.  
Whitingstreet Estate. (2)
- HORNELLSVILLE, N. Y.  
*Hand Freight*  
Curtis, R. S., Furniture.  
Sherwood, F. D., Mfg. Building.
- HUDSON, N. Y.  
*Geared Freight.*  
VanDusen, C. A., Provisions.
- HUGHES SPRINGS, TEX.  
*Hand Freight.*  
Kersler, T. B.
- HUNTINGDON, PA.  
*Hydraulic Passenger.*  
Leister House.
- ILION, N. Y.  
*Geared Freight.*  
Standard Typewriter Mfg. Co. (2)  
*Hand Freight*  
Standard Typewriter Mfg. Co.
- INDIANAPOLIS, IND.  
*Geared Freight.*  
Indianapolis Malleable Iron Co. (2)
- IONIA, MICH.  
*Hand Freight.*  
Webber, Geo. W.
- ITHACA, N. Y.  
*Steel Screw Freight.*  
Ithaca Organ Co.
- JAMESTOWN, N. Y.  
*Hydraulic Passenger.*  
First Methodist Church.  
Gokey, N. W., & Son, Com. Building.  
Havenor Bros., Dry Goods.  
Hotel Everett.  
Sherman House.  
Warner, L. B., Com. Building.  
*Hydraulic Freight.*  
Cole, W. H., Factory.  
Gokey, N. W., & Son, Factory Building.  
*Steel Screw Passenger.*  
Warner, L. B., Office Building.  
*Steel Screw Freight.*  
Broadhead, Wm., Worsted Mill. (2)  
Gokey, N. W., & Son, Boot Factory.  
Kemp, J. R., Factory.  
*Geared Freight.*  
Blystone, W. I., Mattress Manfr.  
Breed, Aldrich & Co., Furniture.  
Breed Furniture Co. (2)
- Fenton, R. E., Metallic Furniture.  
Hall, Lewis, Chair Manufacturer.  
Hall, William, & Co., Worsted Mill.  
Jamestown Bedstead Co.  
Jamestown Worsteds Mills.  
Norquist, A. C., & Co., Furniture  
Olson, A. P., & Co., Furniture Mfrs.  
Park & Hazard, Shoe Manufacturers.  
*Hand Freight.*  
Ahlstrom, A. C., & Co., Piano Mfrs.
- JAMESTOWN, R. I.  
*Hydraulic Passenger.*  
Hotel Thorndyke.
- JERSEY CITY, N. J.  
*Hydraulic Passenger.*  
Post, A., Store Building.  
*Steel Screw Freight.*  
Argus Printing Co.  
Leimbeck & Bectz, Malsters.  
Lime, F. V., Printer.  
Schroeder, E., Lamp Manfr.  
Stewart, T. J., Carpet Cleaning Factory.  
U. S. Torsion Balance Co.  
*Geared Freight.*  
Cleveland, A. B. Co., Seeds.  
Hebe, Koven & Co., Factory.  
Jersey City Packing Co. (Steam.)  
McEwen & Co.  
Swift Bros., Dressed Beef. (3)
- JOHNSONBURG, PA.  
*Hand Freight.*  
Zierden, W. E., Store Building.
- JOHNSTOWN, N. Y.  
*Steel Screw Freight.*  
Stewart, C. H.
- KANSAS CITY, MO.  
*Steel Screw Freight.*  
Abernathy Furniture Co. (3)  
Adams, C. F., Building.

American Biscuit Mfg Co.  
Askew Bros., Factory. (2)  
Bliss Syrup & Refining Co.  
Bullene Building.  
Buck, V. B., Boot and Shoe Factory.  
Cookson Iron Works Co. (5)  
Cotter, J. & T., Factory.  
Deere, Plow Co. (2)  
Grand Avenue Pass. Station. (Passenger.)  
Kansas City Baby Carriage Co.  
Kellogg Newspaper Co.  
Kimberly Hudson Publishing Co.  
Schoen, L. A. (2)  
Swift & Co., Dressed Beef.  
Wolf Bros. Laundry Co. (2)  
Zohner & Bartlet Mfg. Co.

KEARNEY, N. J.

*Hand Freight.*

Kearney, J. W.

KENT, CT.

*Hand Freight.*

Gaylord & Eaton.

LAKE GEORGE, N. Y.

*Hydraulic Passenger.*

Marion House.

LAKE PLACID, N. Y.

*Hydraulic Passenger.*

Grand View Hotel

LAKEWOOD, N. Y.

*Hydraulic Passenger.*

New Kent House.

LANCASTER, PA.

*Hydraulic Passenger.*

Court House Building

*Hydraulic Freight.*

Foltz, C. S., Tobacco Warehouse

Welchans, A. C. (5)

*Steel Screw Freight.*

Welchans, A. C. (9)

*Geared Freight.*

Welchans, A. C.

LANSING, KAN.

*Hydraulic Passenger.*

Kansas State Penitentiary.

LANSING, MICH.

*Hydraulic Passenger.*

Hotel Downey.

Simons, B. F., Dry Goods.

*Hydraulic Freight.*

Buck, M. J., Furniture.

LEAVENWORTH, KAN.

*Steel Screw Freight.*

Abernathy Furniture Co

LEBANON, PA.

*Steel Screw Freight.*

Report Publishing Co.

*Hand Freight.*

Spang, G. H., Hotel.

LE ROY, N. Y.

*Steel Screw Freight.*

Keeney, N. B., & Son, Beans.

*Geared Freight.*

Keeney, N. B., & Son, Beans.

*Hand Freight.*

Ball, S. A., Grocer.

Gillett, J. B., & Co., Hardware.

Gleason, P., Warehouse.

Steinmetz, Philip, Bakery

Wells, S. C., Patent Medicines.

*Hand Sidewalk.*

Woodward, O. F.

LEWISTON, ME.

*Hydraulic Direct Lift.*

Manning, S. H., Residence. (Pass'r.)

LITTLE FALLS, N. Y.

*Hydraulic Freight.*

Adams, Victor, Knitting Mills.

Kingston, Wm., Storage Warehouse.

Little Falls Storage Co.

Sheard, Titus & Co., Warehouse.

*Steel Screw Freight.*

Adams, Victor, Paper Box Mfr.

Gilbert & Walwrath, Knitting Mills.

McKinnon, Robert, Knitting Mills. (2)

Sheard, Titus & Co., Knitting Mills. (2)

*Geared Freight.*

Little Falls Wool Extract Co.

*Hand Freight.*

Howell & Taylor, Furniture.

Metropolitan Hotel

Senior, James, Hardware.

LIVONIA, N. Y.

*Geared Freight.*

Barnard, S. B., Coal.

*Hand Freight.*

Densmore Bros., Stoves and Tinware.

LOCKPORT, N. Y.

*Hydraulic Passenger.*

Prudden Bros., Furniture.

*Steel Screw Freight.*

Hodge Opera House.

Saxton & Thompson, Millers.

*Geared Freight.*

Allen, J., & Son, Bakery.

- Direct Lift Hydraulic.*  
Indurated Fibre Co.
- LONG ISLAND CITY, N. Y.  
*Hydraulic Direct Lift.*  
Queen City Oil Works.
- LOUISVILLE, KY.  
*Geared Freight.*  
Avery, B. F., & Sons, Plow Manfs.  
Cotter, R. B., Lumber Co.
- LOWELL, MASS.  
*Hydraulic Passenger.*  
City Hall Building.  
*Hydraulic Freight.*  
City Hall Building.  
*Steel Screw Freight.*  
Jewett & Swift, Dressed Beef.
- LOWVILLE, N. Y.  
*Geared Freight.*  
Moore's, M. D., Sons, Sash and Blinds.
- LYNCHBURG, VA.  
*Hydraulic Passenger.*  
Pettyjohn, J., & Co.  
*Steel Screw Freight.*  
Bell, Barker & Jennings.
- LYNN, MASS.  
*Geared Freight.*  
Thompson-Houston Electric Mfg. Co.
- LYONS, N. Y.  
*Hand Freight.*  
Chamberlin, S. D., Opera House  
Gilbert, E. F., Furniture.  
Nusbickel & Son, Hardware.
- MANCHESTER, N. Y.  
*Hydraulic Freight.*  
Stark Mills.
- Steel Screw Freight.*  
Swift Dressed Beef Co.
- Geared Freight.*  
Baldwin, James, Co., Mfrs. of Bobbins.  
Manchester Locomotive Works.  
Swift Bros., Dressed Beef.
- MARION, N. J.  
*Geared Freight.*  
Daft Electric Co.  
*Hand Freight.*  
McGlennan, P., Factory Building.
- MARQUETTE, MICH.  
*Steel Screw Passenger.*  
Ide, H. G., Hotel.
- MAUCH CHUNK, PA.  
*Geared Freight.*  
Meding, C. E., Silk Mill.
- MEDINA, N. Y.  
*Steel Screw Freight.*  
Bignall Mfg. Co.  
*Geared Freight.*  
A. L. Swett, Iron Works. (2)  
*Hand Freight.*  
Hoag, Harvey, Groceries.  
Slack, M. & J., Groceries.
- MERIDEN, CT.  
*Hydraulic Passenger.*  
Bixby Bros., Office Building.  
Lewis, J. C., Office Building.  
*Hydraulic Freight.*  
Meriden Britannia Co.  
Parker Bros., Gun Makers.  
*Steel Screw Freight.*  
Meriden Silver Plate Co. (2)  
Miller Bros., Cutlery Co.
- Geared Freight.*  
Meriden Brewing Co.
- MIDDLEPORT, N. Y.  
*Geared Freight.*  
Middleport Mfg. Co.
- MIDDLETOWN, CT.  
*Hydraulic Freight.*  
Connecticut State Hospital.
- MIDDLEVILLE, N. Y.  
*Geared Freight.*  
Nelson & Lansing, Knitting Mill.
- MILWAUKEE, WIS.  
*Steel Screw Freight.*  
Keickheffer, Aug.  
*Geared Freight.*  
Keickheffer, A., & Co. (9)
- MINETTO, N. Y.  
*Geared Freight.*  
Minetto Shade Cloth Co.
- MISSOULA, MONT.  
*Direct Lift Hydraulic.*  
Montana Commercial Co.
- MONTPELIER, VT.  
*Geared Freight.*  
Smith, Fred E., Mfg. Building.
- MONTREAL, QUE.  
*Hydraulic Direct Lift.*  
Darling Bros., Mfg. Building.  
*Hand Freight.*  
Darling Bros., Mfg. Building.



MONTVILLE, N. J.

*Geared Freight.*

Capstick, J. & Sons, Mill Building.

MOTTVILLE, N. Y.

*Geared Freight.*

Mottville Paper Co.

McGRAWSVILLE, N. Y.

*Geared Freight.*

McGraw, P. H., & Son, Corset Mfrs.

McKEESPORT, PA

*Hand Freight.*

Thallman, V. W.,

Wolf, N., Hotel. (2)

MT. MORRIS, N. Y.

*Geared Freight.*

Royal Salt Co.

*Hand Freight.*

Bingham, L. C.

NARRAGANSETT PIER, R. I

*Hydraulic Passenger.*

Hotel Berwick.

Massasoit House.

Metatoxet House.

NASHVILLE, TENN.

*Hydraulic Freight.*

Dupre, C., & Co.

*Steel Screw Passenger.*

Nashville City Gas Light Co.

*Hand Freight.*

Bowers, J. F., & Bro (2)

Byrne Bros. & Co., Grocers.

Dickel, Geo. A., Liquors.

Nash., Chatt. & St. Louis R. R. Co. (2)

Smith, W. C. (2)

Wilson, B. F.

NAUGATUCK, CT.

*Hydraulic Freight.*

Goodyear Rubber Shoe Co. (5)

*Direct Lift Hydraulic.*

Goodyear Rubber Shoe Co.

NEWARK, N. J.

*Hydraulic Passenger.*

Ballantine, R. F., Office Building. (2)

Bleicher F. E., Office Building.

Heyman, Sol., Dry Goods.

Jelleff, J., Office Building.

Lister, Alfred, Office Building.

Muller & Schmidt, Furniture.

Newark City Hall.

Newark City Hospital.

St Michael Hospital.

Van Horn, Amos, Furniture.

*Hydraulic Freight.*

Clark Thread Works.

Cressy, Thomas.

Heath & Drake, Carriage Trimmings.

Polar Construction Co. (2)

*Hydraulic Direct Lift.*

Ballantine, P. & Son, Brewers.

Eberhardt, U., Factory Building.

Lindsley, Jas. A., Residence. Pass'r.

*Electric Screw Passenger.*

Snyder, M. V., & Co., Dry Goods.

*Steel Screw Freight.*

Carley, Thos. F.

Kremetz & Co., Mfg. Jewelers.

Lenz, Aug., Boots and Shoes.

Reilly & Osborne, Trunk Trimmings.

Swift Dressed Beef Co. (2)

U. S. Electric Lighting Co. (2)

*Gear.d Freight.*

Beinbler, VanWagener & Co., Packers.

Blackwood & Coykendall, Coffee Mill.

Bliss & Drake.

Bogardus Novelty Co.

Canfield, G. F., Commercial Bldg.

Carhuff, E. R., Factory Building. (2)

Clark Thread Works (3)

Finter & Co., Wagon Makers.

Gould's Son, Mfr. Stair Rods.

New Jersey Zinc & Iron Co.

Quinby, G. M., Carriages.

Stone, T. & G. M.

Weiss, J., & Sons.

*Hand Freight.*

Thomas & Courter.

NEWARK, N. Y.

*Geared Freight.*

Trotter Refrigerator Co.

*Hand Freight.*

Stebbins, C. A., Warehouse.

Stuerwald, J., Furniture.

NEWARK, O.

*Steel Screw Freight.*

Newark Machine Co.

*Geared Freight.*

Newark Machine Co.

NEW BEDFORD, MASS.

*Hydraulic Passenger.*

Hart, Col. S. C., Odd Fellows Hall.

NEW BRITAIN, CT.

*Hydraulic Passenger.*

Booth, Horace, Office Building.

Porter, B. C., Furniture

*Hydraulic Freight.*

Porter, B. C., Furniture.

Stanley Rule & Level Co

*Steel Screw Freight.*

Stanley Rule & Level Co.

*Geared Freight.*

North & Judd Mfg. Co. (2)

*Hand Freight.*

Booth, Horace, Office Building.

## NEWBURG, N. Y.

*Steel Screw Freight.*

Edgar, Grant E., Furniture.

## NEW HARTFORD, CT.

*Steel Screw Freight.*

Smith &amp; Spencer

## NEW HAVEN, CT.

*Steel Screw Freight.*

Webb, Charles H.

*Gear Freight.*

Armstrong & Co., Carpets.  
 Bradley, R. B., & Co., Agr'l Implements.  
 Meyer, Strauss & Co., Mfrs. Corsets.  
 New Haven Folding Chair Co. (2)  
 Newman, I., & Son, Corset Mfrs.  
 Peck Bros. & Co., Brass Mfrs.

## NEW LONDON, CT.

*Hydraulic Freight.*

Rudd, A., Wholesale Flour.

*Steel Screw Freight.*

Chappell, F. A., &amp; Co.

*Hand Freight.*

Chappell, F. H., &amp; Co.

## NEW ORLEANS, LA.

*Steel Screw Freight.*

Am. White Lead and Color Works.  
 Reynolds Iron Works Co. (3)

## NEWTON, N. J.

*Gear Freight.*

Merriam Shoe Co., H. W.

## NEW YORK CITY, N. Y.

*Hydraulic Passenger.*

Abingdon Square Apartments.  
 Alcozer Apartments.  
 Banks, H. W., & Co., Office Bldg. (2)  
 Bank of Harlem, Office Bldg.  
 Berachah Home.  
 Bidwell, G. R., Bicycle Store.  
 Bloomingdale Bros., Dry Goods. (2)  
 Borgfeldt, G., & Co., Dry Goods.  
 Braender, P., West Park Apart House.  
 Brennan, T., Apartment House. (2)  
 Butler, Matherson & Co., Com. Building.  
 Cavanaugh, Sanford & Co., Tailors.  
 Consumers' Brew. Co., Brewery Building.  
 Crain, D. J., Store Building.  
 DeGraff & Taylor, Furniture.  
 Einstein, E., Office Building.  
 Fifth Avenue Apartments.  
 Franke, W. B. & E., Lenox Hill Apart. House.  
 Franke, W. B., Montana Apartment.  
 Fuller, C. A., Hotel Endicott. (2)  
 Grand Court Apartment House.  
 Hammerslough Bros., Store.  
 Hammerstein, Oscar, Office Building.  
 Hollywood Apartments.  
 Ludwig Bros., Store Building  
 Lesem, Mayer & Dazian, Umbrellas.  
 Lyon, J. C., Commercial Buildings. (3)  
 McIlroy, W. H., Apartment House.  
 Meyer, S., Lexington Apartments. (2)  
 Meyer, S. T., Mercantile Building.  
 Milliken & Smith, Evelyn Apart. House.  
 Montefiore Home, The  
 Moor, H. M., The Monteray Apartments.  
 O'Reilly Bros., Apartment House. (2)  
 Pasteur Institute  
 Prague, J. G., The Brockholst  
 Ramsay, P. N., Earle Court Apartments.  
 Robinson, J. S., St. Nicholas Hotel.  
 Schneider, P., & Son, Store Building.

## Seventh National Bank, Office Building.

Sibley, H., Commercial Building.

Standard Theatre, Office Building.

Steinhardt, M., Apartments. (2)

Sternberger, M. &amp; S., Com. Trav. Office Bldg.

St. Joseph's Home for the Aged.

St. Joseph Hospital.

Walker, A. S., Hotel Bressford. (2)

Walker, A. S., Winthrop Hotel.

Wallace, J. G., Com'l Buildings. (6)

Weiher, L., Hotel St. Lorenz.

Walters, C. L., Dorincourt Apartments.

*Hydraulic Freight.*

Bloomingdale Bros., Dry Goods. (4)

Braedner, Philip, Apartment House.

Butler, Matherson &amp; Co., Com. Bldg.

Consumers' Brew. Co., Brewery Building.

Fuller, C. A., Apartment House. (2)

Hill &amp; Welch, Printers.

Lyon, J. C., Commercial Building.

Milliken &amp; Smith, Evelyn Apart. House. (2)

Prague, J. G., The Brockholst.

Sampter, M., Sons &amp; Co., Clothing. (2)

Sampter, M., Clothing.

Stern Bros., Dry Goods. (9)

Stern Bros., Stables. (2)

St. Joseph Hospital (2)

St. Vincent Hospital. (2)

Walker, A. S., Hotel Bresford. (2)

Wallace, J. G., Commercial Building.

Weiher, L., Apartment House

*Hydraulic Direct Lift.*

Wallace, J. G., Store Buildings. (4)

*Electric Screw Passenger.*

Hayden Furniture Co.

Hutcheson, R., Apartments.

Mosgrave, F. E., Store Building.

*Steel Screw Passenger.*

Arnheim, Mark.

Booth &amp; Connolly, Store Building.

Geisenheimer, H.

Leaycraft, J. R., Commercial Building.  
 Lyons, J. C., Commercial Building.  
 McDowell, P., & Co., Lumber.

*Steel Screw Freight.*

Argyle Press Co.  
 Bartholomay Brewing Co (2)  
 Benedict, S F, & Co., Mfrs. Brass.  
 Bloomenthal, A., Silk Mill.  
 Boorum & Pease, Publishers.  
 Boynton Furnace Co.  
 Brainard, A. W., Factory Building.  
 Briggs, Marvin, Factory Building.  
 Broadway R'y Co., Power House.  
 Burr Printing Co.  
 Carter Ink Warehouse.  
 Cassin, J., Commercial Building.  
 Central Stamping Co. (2)  
 Chambers, Jas., Factory Building.  
 Chattillon, J., Sons, Factory Building. (2)  
 Chesebro, D. P., Warehouse.  
 Cleveland, A. B., Co., Seeds.  
 Coby, E. P., & Co., Stationery.  
 Cole, A. G., Laundry.  
 Conovers, J. S., & Co., Mantels.  
 Cox, P., Shoe Co.  
 Crouch & Fitzgerald, Factory.  
 Dascher, W. C.  
 DeBois, D. H.  
 DeGraff & Taylor, Furniture.  
 Degrauw, Aymar & Co., Ship Chandlers.  
 Deitz, R. E., Manufacturer Tubular Goods. (2)  
 DeWitt Wire Cloth Co.  
 Dolge, Alfred, Mfr. Felt (2)  
 Doll, Jacob, Piano Mfr.  
 Doscher, W. C., Factory.  
 Downey, James, Contractor.  
 Downey, John, Carpenter.  
 Duncans' Sons, John, Who. Grocery.  
 Einstein & Co., Store Building.  
 Ferguson Bros., Factory Building.  
 Friedrichs, E. H., Factory Building.

Fritzsche Bros, Perfumes.  
 Fyfe, John & Co., Real Estate.  
 Geisenheimer, H.  
 Gillis & Geoghegan, Store Bldg. (Steam Pass.)  
 Gillies, E. J., Commercial Building.  
 Glass, John & Son.  
 Haertelin & Schlatter, Mfrs Trimmings.  
 Haight, C. F., Factory Building.  
 Haines Bros., Piano Mfrs. (2)  
 Hall, E. M., Factory Building.  
 Hamm, H. D., Piano Factory.  
 Hammersley, J. W., Estate.  
 Hanan & Son, Shoe Factory. (2)  
 Hawkes Plate Glass Company.  
 Hazelton Piano Co.  
 Helmstetter, G., Candy Factory. (2)  
 Henderson, P., & Co., Store Building.  
 Herman, M. S., Commercial Building.  
 Hess, D. S., Furniture.  
 Hiede, H., Store Building.  
 Hills Bros. & Co., Store.  
 Horgan & Slaterry. (3)  
 Hurd, G. B., & Co.  
 Kauffman, I & Son, Factory Building.  
 Kerbs, Wertheim & Schiffer, Cigars.  
 Koenig G. L., Printer.  
 Krenrich & Kenner, Furniture.  
 Kuhles, Wm, Factory Building.  
 Lane, Wm., Boots and Shoes.  
 Levy, Bernard S.  
 Liedeman, A., Spices.  
 Lincks, Jacob.  
 Loth, Jacob, Silk Mill.  
 Lyons, J. C., Com. Building.  
 Manning, Bowman & Co., Silver Plated Ware. (2)  
 Mattson, M., Surgical Instruments.  
 McKesson & Robbins, Drugs.  
 McLean Eng. Co.  
 McNab & Harlan, Steam Fixtures.  
 Morgan, J. L., & Sons, Ship Chandlers.  
 Mott, H. S. (2)  
 Murphy, J. J., Toys.

Murray Hill Hotel.  
 New, Jacob, Mfr. Ribbons (2)  
 New, J., Store Building  
 Nesbit, W. T., Commercial Building.  
 New York Safety Steam Power Co. (2)  
 Odiorne, D. N., Mfr. Umbrella Covers.  
 O'Reilly Bros., Warehouse Steam Pass.  
 Ottenberg Bros., Cigar Factory. (2)  
 Oxley, Gidding & Enos, Gas Fixtures. (2)  
 Palmer & Embury, Furniture.  
 Palmer Mfg Co., Stove Boards.  
 Radley & Greenough.  
 Rees & Rees, Factory.  
 Rhoner, Frank, Furniture.  
 Rilling & Shock, Machine Dealers.  
 Rockwell, Percy, Bakery.  
 Roosevelt, Frank, Factory Building. (3)  
 Schrenkeiser, M., Com. Building  
 Sebastian Mfg. Co, Wagons.  
 Seely, G. B., & Son, Soda Water.  
 Shaw Blank Book Co.  
 Sherwin-Williams Co., Paint Warehouse.  
 Smith, G. D., Dairy Kitchen Restaurant.  
 Smith & Kaufman, Silk Mill.  
 Smith, Worthington & Co., Saddlery.  
 Standard Oil Clothing Co., Factory Bldg.  
 Steiger, E., & Co., Publishers.  
 Stevens, Calvin, Estate. (3)  
 Stivers, R. M, Carriages.  
 Swift Bros. & Co., Beef Storage.  
 Union Rattan Co., Furniture.  
 VanBuren Estate, Com. Building.  
 Vernon, Thos., Knitting Mill.  
 Vogelsang's, J., Sons, Store Building.  
 Wallace, J. G., Com. Bldg. (Steam Pass. 2)  
 Wallace, R. A., Factory Building.  
 Wallace, Elliott & Co, Shoe Dealers.  
 Welch, Chas. S. (4)  
 Weser Bros.  
 Wilson, P. M., Com. Building.  
 Zeltner, H., Brewery Building.

*Geared Freight.*

Allen, J. F., Factory.  
 American Carbonate Co.  
 American Express Co Stables. Steam.  
 American News Co., Stables.  
 American Stove Board Co.  
 Beinecke & Co., Butchers.  
 Benick & Co., Storage Warehouse.  
 Black, J. R.  
 Block, David.  
 Briggs, Marvin, Machinery Dealer.  
 Buckner, D., & Co.  
 Buffalo Door and Sash Co.  
 Central Stamping Co  
 Chattillon, J., & Son, Store Building. (2)  
 Clark, F. A., Cigar Manufacturer. (2)  
 Clark, T. B., Factory Building.  
 Clash, R. J., Machinist.  
 Cook, V., Factory Building.  
 Coon, L., Warehouse  
 Coon, L., Store Building. Steam.  
 Cruger, S. V. R., Store Building.  
 Culbert Bros., Hardware.  
 Curran, James, Commercial Bldg.  
 Dietz, R. E., Mfr. Tubular Goods.  
 Dimick, J. W., Store Building.  
 Dolge, Alfred, Factory Building.  
 Doll, Jacob, Furniture.  
 Elliott & Congle, Furniture.  
 Everard, J., Brewer. (3)  
 Fisher, Chas., Piano Mfr.  
 Fisk, J. M., Warehouse.  
 Fochrenbach, F., & Co.  
 Frankfield, E., Packing House.  
 French, C. A., Carpenter.  
 Fitzgerald, J. M., Paper Store.  
 Glass, John, & Son.  
 Goerlitz, J., Store Building. (2)  
 G. A. & P. Tea Co., Store Building.  
 Gustavensen, E., Planing Mill. (2)  
 Haertelin & Schlatter, Mfrs. Trimmings.

Haight, C. F., Factory Building.  
 Haines Bros., Piano Manufacturers. (2)  
 Hawley & Hoopes, Factory Building. (2)  
 Hirsch, L. M., Store Building. Steam  
 Jansen, E., Florist.  
 Jube, J. P., & Co., Hardware  
 Kendall, C. S., Factory Building.  
 Kilpatrick, E., Factory Building. (2)  
 Lennon, W. F., Cigar Factory.  
 Lovell, Charles, Stables.  
 Lyman, F. C., Stable  
 Lyons, J. C., Com. Buildings. 3 Steam.  
 Mandel Bros., Com. Building.  
 McDowell & Co., Lumber. (2)  
 McElway Mfg. Co  
 McGuckin, H. J., Plumber.  
 McLean Eng. Co.  
 McMullen, T., & Co., Brewery. (2)  
 Meyer, C. D., Store Building.  
 Mott, H. S  
 Munroe, N. L., Store Building.  
 New York Dey Wood Extract & Chemical Co.  
 O'Reilly Bros., Store Warehouse. 2 Steam.  
 Pelham Hod Elevating Co.  
 Powers, J. W., Stable.  
 Richardson, G. H., Storage Warehouse. (2)  
 Rilling & Shock.  
 Robinson & Wells, Warehouse.  
 Rogers & Pyatt, Drugs.  
 Ryan, P., Packing Boxes.  
 Seaman, John G., Livery.  
 Sebastian Mfg Co., Wagons.  
 Seitz, F. A. (3)  
 Sargent, Cullingworth & Co., Merchants.  
 Simpson, J. S. & G. F., Factory Building. (2)  
 Smith, E., Livery.  
 Steinkoff, W. N., Factory Building.  
 Theriault, Mat.  
 Wallace, J. G. 2 Steam.  
 Welch, Chas. S.  
 Westcott, R. E. Stable.

Wheelock, M. E., & Co., Pianos.  
 Vogel, E., Furniture Factory.

*Hand Freight.*

Brazilian Trade Co.  
 Brennan, T., Stable. (6)  
 Colonial Club.  
 Cruikshank, Wm.  
 Decker, F. W., & Sons, Stables.  
 Kahner, L., & Co., Cigar Mfrs.  
 Reubens, J., & Son, Factory.  
 Seaman, John G., Livery.  
 Valentine, C. F., Stable.  
 Young, Peter, Factory Building. (2)  
 Zuricady, A., Warehouse.

*Hydraulic Direct Lift.*

Sampter, M., Sons & Co., Clothing. (2)  
 Sampter, M., Clothing.

## NIAGARA FALLS, N. Y.

*Hydraulic Passenger.*

Gluck Office Building.  
 Spencer House.

*Steel Screw Freight.*

Central Milling Co.  
 Schoellkopt & Matthews, Millers.

*Geared Freight.*

Carter & Co., Printers. (2)  
 Cliff Paper Co.  
 Niagara Falls Paper Co. (3)  
 Niagara Wood Paper Co.  
 Pettebone Cataract Paper Co.  
 Philpot & Leuppie, Machinists.

*Hand Freight.*

Phillips & Co., Store.  
 Pierson, M. V., & Co.

*Sidewalk Elevator.*

Butler, M. B., Store.



## NORFOLK, VA.

*Steel Screw Passenger.*  
Purcell House.

## NORWICH, CT.

*Hydraulic Passenger.*  
Shannon, J. B., Office Building.  
*Steel Screw Freight.*  
Roger, C. B., & Co., Wood Working Machinery

## OGDEN, UT.

*Hydraulic Passenger.*  
Reed House.  
*Hydraulic Freight.*  
Reed House.

## OGDENSBURG, N. Y.

*Hydraulic Direct Lift.*  
N. Y State Hospital.  
*Hand Freight.*  
N. Y State Hospital.

## OLEAN, N. Y.

*Hydraulic Passenger.*  
Marvin Temple.  
*Geared Freight.*  
Buswell, Brown & Co., Tanners. (2)  
Conklin, W. H. & D. C., Wagon Mfrs.  
Moore, H. W., & Co., Wagon Mfrs.  
Wright, Clark & Co., Tannery.  
*Hand Freight.*  
Bond, E. E., Hides.

## ONEIDA, N. Y.

*Steel Screw Freight.*  
Chappel, Chase, Maxwell & Co., Caskets.  
*Geared Freight.*  
Chappel, Chase, Maxwell & Co., Caskets.

Hicks, Mott & Co., Furniture Mfrs.  
Sage, O. W., Sash and Blinds.  
Spencer, J. L., & Co., Carriage Mfrs.

## ONEONTA, N. Y.

*Hand Freight.*  
Rowe, J. C. & G. N., Who. Grocers.

## ORISKANY, N. Y.

*Steel Screw Freight.*  
Waterbury, H., Sons Co., Woolen Mill. (2)

## OSWEGO, N. Y.

*Steel Screw Freight.*  
Paine & Hunter.  
*Geared Freight.*  
Blanchard, O. M., Co., Planing Mill.  
Conde Swits.  
Diamond Match Co., Factory. (2)  
O'Keefe, T. E., Who. Liquor.  
Oswego Shade Cloth Co. (5)  
*Hand Passenger.*  
Mott, T. L., Residence.  
Norton, W. S., Furniture.  
Smith & Leib, Hardware.

## OTTAWA, ONT.

*Electric Passenger.*  
Miller Bros. & Tonis, Store.

## PALMYRA, N. Y.

*Geared Freight.*  
Garlock Packing Co.

## PASSAIC, N. J.

*Steel Screw Freight.*  
McLean, A., & Co., Mfrs. Netting.  
*Geared Freight.*  
Okonite Mill. (3)  
Worthen & Aldrich, Satinet Goods. (2)

## PATCHOGUE, N. Y.

*Geared Freight.*  
American Lace Co. (2)

## PATTERSON, N. J.

*Hydraulic Passenger.*  
Meyer Bros., Dry Goods.  
VanDyke, F. C., & Co., Furniture.  
*Hydraulic Freight.*  
Muzzy Bros., Agricultural Implements.  
*Screw Passenger.*  
Patterson General Hospital.  
*Steel Screw Freight.*  
Baumford Bros., Silk Mill.  
Eastwood, B., Factory Building.  
Hand, J., & Son, Silk Mill.  
Mending, C. E., Silk Mill.  
Pelgrem & Myers, Mfrs. Silk Ribbons. (2)  
Wechsler, L., & Co., Shirt Mfrs.  
*Geared Freight.*  
Baumford Bros., Silk Mill.  
Frost, G., & Son, Silk Mill.  
McNab & Harlin Mfg. Co. (3)  
*Hand Freight.*  
Koch & Squirk, Butchers.  
Norwood, J., & Co.

## PAVILION, N. Y.

*Hand Freight.*  
Sprague, W. B., Residence.

## PAWCATUCK, R. I.

*Geared Freight.*  
Clark, The Wm. Co., Thread Works.

## PAWTUCKET, R. I.

*Hydraulic Passenger.*  
Old Ladies' Home.  
*Steel Screw Freight.*  
Sayles, W. F. & F. C., Bleachery. (2)

## PENFIELD, N. Y.

*Hand Freight.*  
Bown Bros.

## PENN YAN, N. Y.

*Hand Freight.*  
Bush, E., Bottler.  
Hughes, C. J., Hardware.  
Russell & Birkett, Storage Warehouse.

## PERRY, N. Y.

*Gear'd Freight.*  
Perry Knitting Co.  
*Hand Freight.*  
Olin, M. H., Hardware.

## PERTH AMBOY, N. J.

*Gear'd Freight.*  
Pardee Brick Works. (2)

## PHELPS, N. Y.

*Gear'd Freight.*  
Crown Manufacturing Co., Grain Drills.

## PHELPS JUNCTION, N. Y.

*Gear'd Freight.*  
Walker Fertilizer Co.

## PHILADELPHIA, PA.

*Hydraulic Passenger.*  
Keeney, Theo. M., Dry Goods.  
Kirshbaum, A., & Co., Store Bldg.  
Walsh, Philip.  
Wanamaker, John, Dry Goods. (2)  
*Hydraulic Freight.*  
Hensel-Colliday Co., Store Building.  
Kirshbaum, A., & Co., Store Bldg.  
Morse, Williams & Co.  
Walsh, Philip.  
Wolf, Otto C., Warehouse. (4)

*Hydraulic Direct Lift.*

Kirshbaum, A., & Co., Store Bldg.  
Wanamaker, John, General Store.

*Gear'd Freight.*

Berry & Orton Co.  
Stokes & Parish Machine Co. (2)

## PHOENICA, N. Y.

*Gear'd Freight.*  
Chichester Chair Co.

## PIEDMONT, W. VA.

*Steel Screw Freight.*  
Piedmont Pulp & Paper Co.

## PIERRE, S. DAK.

*Hydraulic Passenger.*  
Hotel Locke.

## PITTSBURGH, PA.

*Hydraulic Passenger.*  
Commercial National Bank.  
Kaufman, J., & Bro., Clothing.  
Renshaw, J. A., & Co., Grocers.

*Hydraulic Freight.*

Armour & Co., Dressed Beef.  
Bell, J. H., & Bro., Furniture.  
Childs, H., & Co., Who. Shoes.  
Kleber & Bro., Music.  
Milliken, J., & Co., Furniture.  
McClintock, O., & Co., Carpets, etc.

*Steel Screw Freight.*

Logan, A. J., & Co., Mattress Mfrs.  
Marshall, Kennedy & Co., Millers.  
Marvin, S. S., & Co., Bakers.  
Schmertz, W. E., & Co., Boots and Shoes.

*Gear'd Freight.*

Marvin, S. S., & Co., Bakers.

*Hand Freight.*

Keighley & Co., Gal. Iron Works.

## PLAINFIELD, N. J.

*Hand Freight.*  
Hatfield, Levi.

## PLANTSVILLE, CT.

*Steel Screw Freight.*  
Smith, H. D., Paper Mill.

## PLATTSBURG, N. Y.

*Steel Screw Freight.*  
Plattsburg Light, Heat & Power Co.  
*Gear'd Freight.*  
Plattsburg Milling Co.  
Williams Manufacturing Co.

## PORT RICHMOND, N. Y.

*Gear'd Freight.*  
Jewett White Lead Co.

## POTTSVILLE, PA.

*Steel Screw Freight.*  
Tilt Silk Mills.

## POUGHKEEPSIE, N. Y.

*Hydraulic Passenger.*  
McGregor, C. F., Furniture.

## PRESCOTT, ARIZ.

*Gear'd Freight.*  
Commercial Mining Co.

## PROVIDENCE, R. I.

*Hydraulic Passenger.*  
Kennedy, J., & Co., Clothing.  
Kent & Stanley, Jewelry.  
Swartz, H. D., Office Bldg.  
*Hydraulic Freight.*  
Kennedy, J., & Co., Clothing.  
Swartz, H. D., Office Building.

*Screw Passenger.*  
 Lederer, S. & B., Factory Building.  
*Steel Screw Freight.*  
 American Brewing Co.  
 Kent & Stanley. (2)  
*Geared Freight.*  
 American Electrical Works.

PUEBLO, COL.  
*Steel Screw Freight.*  
 Pueblo Smelting & Refining Co.

READING, PA.  
*Hydraulic Freight.*  
 O'Reilly, F. P., Mfg. Bldg.

RENOVA, PA.  
*Geared Freight.*  
 Pennsylvania Railroad Shop.

RICHMOND, IND.  
*Geared Freight.*  
 Garr, Scott & Co., Warehouse.

RICHMOND, VA.  
*Hydraulic Passenger.*  
 Ballard House.  
*Steel Screw Passenger.*  
 Kauffman Bros.  
 Murphy's Hotel.  
 Raub, E., Hotel.  
 Strauss Hotel.  
 Times Building.  
*Steel Screw Freight.*  
 Black, B. J.

ROCK CITY FALLS, N. Y.  
*Steel Screw Freight.*  
 Kilmer, Chauncey, Paper Mill.

ROCKVILLE, CT.  
*Steel Screw Freight.*  
 White, Corbin & Co.

ROCHESTER, N. Y.  
*Hydraulic Passenger.*  
 Beckly, Office Bldg.  
 Beir, Albert, Furniture.  
 Bracket House Buildings.  
 Burke, FitzSimmons, Hone & Co., Dry Goods.  
 Butts & Oothout, Office Bldg.  
 Churchill, W. W., Commercial Bldg.  
 City Hospital.  
 Cook Opera House Bldg.  
 Cornwall, Geo., Commercial Building.  
 Cox, Patrick, Commercial Bldg. (2)  
 East Side Savings Bank, Com. Building.  
 Ellwanger & Barry, Lower Falls.  
 Ellwanger & Barry, Office Bldg. (2)  
 Fahy, J., & Co., Dry Goods.  
 Free Academy.  
 Garson, Myers & Co., Clothing.  
 Glenny, W. H. & Co., Store Building.  
 Heywood Office Building.  
 Hotel Livingston.  
 Howe & Rogers, Carpets.  
 Kent, J. H., Photographer.  
 Kirly, P., Commercial Bldg.  
 Klein, F. J., The Homestead.  
 Masonic Temple.  
 Minges & Shale, Furniture.  
 New Osborn House. (2)  
 New Windsor Hotel.  
 Odd Fellows Temple.  
 Powers Fire-Proof Hotel.  
 Rochester German Ins. Co., Office Bldg.  
 Rochester Savings Bank Building.  
 Sibley, Hiram, Seeds.  
 Sibley, Lindsay & Curr, Dry Goods. (9)  
 St. Mary's Hospital.  
 Stein, Bloch & Co., Who Clothing.  
 Stoddard, Dr. E. V., Office Bldg.  
 Union Clothing Bldg. (2)  
 Warner, H. H., Residence.  
 Whitcomb House. (2)

Wilder, Samuel, Office Building. (2)  
 Wisner, H. C., Glassware.  
 Y. M. C. A. Building.

*Hydraulic Freight.*  
 Aldrich, Theo., Fruits.  
 Bartholomay Brewing Co.  
 Burke, FitzSimmons, Hone & Co., Dry G'ds. (3)  
 Brewster, Crittenden & Co., Who. Grocers.  
 Brewster, Gordon & Co., Who. Grocers.  
 Brittenstool, J. A., Clothing.  
 Buell, Geo. C., Who. Grocer. (2)  
 Churchill, W. W., Commercial Bldg.  
 City of Rochester, Lift Bridges. (6)  
 Cleveland, H. B., & Co., Fruits.  
 Cook & Gerling, Store Building.  
 Co-Operative Foundry Co. (2)  
 Cohn, H., Neckwear.  
 Cox, Patrick, Commercial Bldg.  
 Craig, Commercial Bldg.  
 Dewey Furniture Co.  
 Garson, Meyer & Co., Clothing.  
 Glenny, W. H., & Co., Crockery.  
 Hamilton & Matthews, Hardware. (2)  
 Hill, J. H., Hardware.  
 Hollister Bros., Commercial Bldg.  
 Kolb, M., & Son, Clothing.  
 Laney, James & Co., Rags.  
 Mechanics Savings Bank Building.  
 McAlpine, B. D., Commercial Building.  
 Municipal Gas Co.  
 Powers Hotel, Baggage. (2)  
 Potter, H. S., Com. Bldg. (2)  
 Roby, S. B., Hardware. (2)  
 Rochester Distilling Co.  
 Ross, L. P., Boots and Shoes.  
 Sibley, Hiram, Seeds.  
 Sibley, Lindsay & Curr, Dry Goods. (3)  
 Singer Mfg. Co.  
 Soule, A. T., Hop Bitters.  
 State Industrial School. (2)  
 Stein, Bloch & Co., Who. Clothing.

Stein Mfg. Co., Caskets.  
 Tytler, C., & Co., Wooden Ware.  
 Walbridge, D., Commercial Building.  
 Weaver & Goss, Hardware.  
 Weldon, Geo., & Co., Paper Hangers.  
 Webber, Sheil & Rosenbaum, Clothing.  
 Welcher, H. E., & Co., Ladies' Underwear.  
 Williamson & Higbie, Stationers.  
 Woodbury, W. E., Who. Grocer.  
 Wood, Walter A., Mowers and Reapers.

*Electric Passenger.*

Consistory Hall.  
 Haslachter & Co., Millinery.  
 Stallknight & Schminke, Furniture.

*Steel Screw Passenger.*

Bartholomay Brewing Co.  
 Briggs, J. E., Commercial Bldg.  
 Democrat & Chronicle.  
 Graves, H. B., Furniture.  
 Hahnemann Hospital.  
 Jenkinson, The, Apartment House.  
 Keehn, E. J., Apartment House.  
 Whitbeck Hospital.

*Steel Screw Freight.*

Anthony, D. M., Bakery.  
 Archer, Geo. W., Com. Building.  
 Armstrong & Co., Shoe Factory.  
 Bartell's Mfg. Co., Ladies' Underwear.  
 Bartholomay, H., Com. Building. (3)  
 Bausch & Lomb Optical Co. (2)  
 Behn & Young, Shoe Factory.  
 Beir & Stern, Clothing Mfrs.  
 Bolton, Thomas, Shoe Factory.  
 Booth, J. E., Commercial Bldg.  
 Briggs, J. E., Commercial Building.  
 Brooks & Kelly, Shoe Factory.  
 Brownell, F. A., Photo. Supplies.  
 Chase Bros., Seeds.  
 Cauffman, Dinkelspiel & Co., Clothing.  
 Cohn, H. C., & Co., Neckwear Mfrs.

Cox, P., Shoe Co., Shoe Factory. (3)  
 Crossman Bros., Seeds.  
 Cunningham Sons & Co., Carriages. (2)  
 Curtis & Wheeler, Shoe Mfrs.  
 Dewey, I. H., Furniture Co.  
 Dugan & Hudson, Shoe Factory.  
 Eastman Kodak Co. (3)  
 Eddy & Webster, Shoe Factory. (2)  
 Gleason, William, Machine Tools.  
 Goodger, W. H., Shoe Manufacturer.  
 Gorsline, W. H., Commercial Bldg. (2)  
 Graves, H. B., Furniture.  
 Hagen & Myers, Star Laundry.  
 Ham, C. T., Mfg. Co., Lanterns.  
 Hayden, C. A., Commercial Bldg. (3)  
 Hayden Furniture Co.  
 Hess, S. F., & Co., Tobacco Works. (3)  
 Hinds, J. A., & Co., Millers. (2)  
 Hollister Bros., Lumber.  
 Hough & Ford, Shoe Factory.  
 Hughes, F. L., Who. Toys.  
 Hunt, J. K., Paper Box Mfr. (4)  
 Hydraulic Buildings  
 Inglis Dry Plate Co.  
 Judson, J., & Son, Steam Governors.  
 Kelley, John, Shoe Factory.  
 Kellogg, R. D., Tobacco Works.  
 Kimball, W. S., & Co., Tobacco Works. (3)  
 Kolb, M., & Son, Clothing Mfrs.  
 Levi & Swartz, Clothing.  
 Lowenthal, Max, Knit Goods.  
 Meyer & Greentree, Clothing.  
 Myers, R. M., & Co., Paper.  
 Michaels, Stern & Co., Clothiers.  
 Michaels, H., & Co., Clothing.  
 Montgomery, J. F., & Son, Mfg. Building.  
 Moore & Biers, Clothing.  
 Mosley & Motley, Millers. (2)  
 Muldner Carpet Cleaning Works.  
 Mumford, Geo. E., Mfg. Building.  
 Photo Materials Co., Factory.

Post-Express Printing Co. (2)  
 Potter, H. S., Commercial Building.  
 Reed, E. P., & Son, Shoe Factory. (2)  
 Robinson & Cole, Shoe Factory.  
 Rochester Distilling Co.  
 Rochester Power Co., Factory Bldg.  
 Rosenberg, H., Clothing Mfr.  
 Rosenberg, Wolf & Blum, Clothing.  
 Ross, L. P., Boot and Shoe Mfr.  
 Rothschild, Hays Co., Clothing.  
 Sargent & Greenleaf, Locks.  
 Selden, L. V., Estate.  
 Sibley, H., Estate, Com. Building. (2)  
 Sibley, Lindsay & Curr, Dry Goods.  
 Siddons, John, Galvanized Iron Works.  
 Smith, J., Manufacturing Bldg.  
 Smith & Perkins, Wholesale Grocers.  
 Snyder, J. B., Stoves.  
 Star Palace Laundry, (2)  
 Steam Gauge and Lantern Works.  
 Stecher Lithographing Co.  
 Stein, Bloch & Co., Clothing.  
 Stein Manufacturing Co., Caskets. (2)  
 Stern, I., & Co., Clothiers.  
 Straus, Moore & Bier, Clothing.  
 Traders Nat. Bank, Factory Bldg.  
 Union and Advertiser Co. (2)  
 Vick, James, Seed Warehouse.  
 Wagner, J. G., Mfg. Building.  
 Weaver & Goss, Who. Hardware.  
 Wile, Stern & Co., Clothing.  
 Williams & Hoyt, Shoe Factory.  
 Wolf, A. E., Mercantile Building. (2)  
 Woodbury & Co., Whip Manufacturers.  
 Wray, Henry, Brass Foundry.  
 Yawman & Erbe, Optical Goods. (2)

*Gearred Freight.*

Allen, L. L., Flannel Mills,  
 American Brewing Co.  
 American Chemical Co.  
 Atwater, Armstrong & Clarke, Mfg. Bldg.



Bausch & Lomb Optical Co.  
 Blatau, Carl, Bakery.  
 Bosworth, E. J., Printer.  
 Brooks Bros., Furniture.  
 Brush Electric Light Co.  
 Butts, I., Estate, Mfg. Building. (2)  
 Butts, J. DeW., Factory Bldg. (2)  
 Clark, Freeman, Mfg. Building.  
 Connell & Dengler, Machinery.  
 Co-Op. Foundry Co., Stoves. (2)  
 Crouch, G. W. & F. P., Lumber.  
 Crouch, C. T., & Son, Factory Building.  
 Cunningham, Jas., Sons & Co., Carriages.  
 Curtice Bros., Fruit Canners. (4)  
 Davis, J. G., & Son, Millers. (2)  
 Deninger, F., Bakery.  
 Dewey, I. H., Furniture Co. (2)  
 Disbrow, I. S., Box Factory. (3)  
 Duffner, John, & Son, Last Mfy.  
 Duffy Cider Co.  
 Enright, M. P., Ale Brewer.  
 Farley & Hoffman, Show Cases.  
 Fee Bros., Wholesale Liquors. (3)  
 Flour City Soap Co.  
 Genesee Brewing Co. (3)  
 Ham, C. T., Mfg. Co., Lanterns.  
 Hayden Furniture Co.  
 Hayden & Crouch, Chair Factory.  
 Heughes, J. C., Mouldings.  
 Hey, Levi, Rags.  
 Keeler & Jennings, Carriage Mfrs.  
 Kidd Estate, Factory Building.  
 Kolmetz & Son, Machine Mfrs.  
 Lampert Estate.  
 Laney, James, Estate. (2)  
 Langslow, Fowler & Co., Furniture.  
 Likly, H., & Co., Trunks, etc. (2)  
 Lockhart Moulding Co., Mouldings. etc.  
 Mack Tool Co. (2)  
 Mackay, Geo. L., Mfg. Building.  
 Michaels, F. P., Machine Mfr.

Miles Bros., Sash and Doors.  
 Miller Brewing Co.  
 Minges & Shale, Furniture.  
 Munn & Anstice, Foundry. (3)  
 McMillen, W. S., Miller.  
 Naylor, J. W., Shoe Factory.  
 Occumpaugh, E., Mfg. Building.  
 Otis & Gorsline, Sewer Pipe.  
 Palace Steam Laundry.  
 Phelan, J., Shoe Mfr.  
 Pike, R. E., Quarry.  
 Pitkin, Peter. Monuments.  
 Ritter, F., Furniture Factory. (3)  
 Roby, S. B., Wheel Works.  
 Rochester Basket Works.  
 Rochester Brewing Co. (3)  
 Rochester Car Wheel Works. (3)  
 Rochester Distilling Co.  
 Rochester Electric Light Co., Factory Bldg.  
 Rochester Machine Screw Co.  
 Rochester Paper Co. (2)  
 Rochester Power Co., Factory Building. (5)  
 Rochester Printing Co., Democrat & Chronicle.  
 Rochester Stamping Works. (2)  
 Sibley, Hiram, Seeds. (2)  
 Sill Stove Works.  
 Smith, J., Manufacturing Bldg.  
 Smith, Perkins & Co., Who. Grocers.  
 Standard Brewing Co.  
 Standard Sewer Pipe Co.  
 Steam Gauge and Lantern Works.  
 Taylor Bros., Thermometers.  
 Union Brewing Co.  
 Wagner, J. G., Factory Building.  
 Whalen, R., Tobacco.  
 Weaver, Thomas & Kirk, Shoes.  
 Whitney, James, Mfg. Building.  
 Whitney, J. W., Factory Building.  
 Wilson, George, & Co., Millers.  
 Wright, Alfred, Perfumer.  
 Yates, A. G., Factory Building.

Yawman & Erbe, Factory Building.  
*Hand Elevators.*  
 Andrews, J. S., Commercial Bldg.  
 Armour & Co., Dressed Beef.  
 Bartholomay Brewing Co.  
 City Hospital.  
 Clark, B., Residence.  
 Clark, G. H., Mfg. Bldg.  
 Cohen, H. C. & Co., Necktie Mfrs.  
 Cohen & Levi, Rags.  
 Cook, Fred, Stables.  
 Dwyer, M., Stable.  
 East, H. R., Provisions.  
 Eastman Kodak Co. (2)  
 Green, Seth, Mfg. Bldg.  
 Harned, B. C.  
 Hilbert Truck Co.  
 Hirschburg, I., Clothing Mfr.  
 Hoffman Wagon & Carriage Co.  
 Hotel Atlantic  
 Hough, D. M., Residence.  
 Industrial School.  
 Keeler & Jennings, Carriages.  
 Kimball, Wm. S., Stables.  
 Kirkpatrick, R., Stoves.  
 Lane, G. A. Carriage Mfr.  
 Laney, James, Rags.  
 Laney & Barker, Who. Rags and Tinware.  
 Likly, H., & Co., Trunk Mfrs.  
 Nagle, A., Apartment House.  
 Oliver Chilled Plow Co., Warehouse.  
 Post-Express Printing Co.  
 Powers, D. W., Commercial Bldg.  
 Rauber, P. F., & Bro., Who. Liquors. (2)  
 Rochester Distilling Co.  
 Sheffer, A. R. Warehouse.  
 Sheffer & Luetchford, Stor. Warehouse.  
 Sibley, H. W., Stable.  
 Snow & Cook, Livery Stable.  
 St. Mary's Hospital. (2)  
 Teal, Isaac, Caterer.

Tichner & Jacobi, Clothing Mrs.  
 Wolf, William, Residence.  
 Wright, I. N., Stables.

*Hydraulic Direct Lift.*

Hotel Livingston.  
 Likly, H., & Co., Factory.  
 Sibley, Lindsay & Curr.  
 State Industrial School  
 Wilder, Samuel

*Sidewalk Elevator.*

Alder, L., & Bros., Clothing. (2)  
 American Express Co  
 Bartholomay Brewing Co.  
 Beckley Office Building. (3)  
 Cauffmann, Dinkelspiel & Co., Clothing,  
 Cohn, H. C., & Co., Neckwear.  
 Cook, Frederick, Store Bldg.  
 Culross Bakery.  
 Curtis & Wheeler, Shoe Mfrs.  
 Dugan & Hudson, Shoes.  
 Eastman Kodak Co. (3)  
 Eddy & Webster, Shoes.  
 Garson, Meyer & Co., Clothing.  
 Hayden, C. A., Commercial Bldg.  
 Kolb, M., & Son, Clothing.  
 Levi & Schwartz, Clothing.  
 Michaels, Stern & Co., Clothing.  
 Moore & Beirs, Clothing.  
 Mudge, A. W., Store Building.  
 Powers, D. W., Store Building. (2)  
 Reynolds & Eddy, Commercial Bldg.  
 Rochester Beef Co.  
 Rochester Machine Screw Co.  
 Rochester Machinery Construction Co.  
 Rochester Railway Co., Power House.  
 Rosenberg, H., Clothing.  
 Rosenberg, Wolf & Blum, Clothing.  
 Rothschild, Hays & Co., Clothing.  
 Sage, E. O., Commercial Buildings.  
 Shaffer Bros., Grocers.

Stein, Bloch & Co., Clothing.  
 Steinfeld Bros., Tobacco.  
 Stern, I., & Co., Clothing.  
 Stoddard, E. V., Office Bldg. (2)  
 Strauss, Moore & Beir, Clothing.  
 Teal, Isaac, Caterer.  
 Weaver & Goss, Hardware.  
 Weber, Sheil & Rosenbaum, Clothing.  
 Wile, Stearn & Co., Store Bldg.

ROME, N. Y.

*Geared Freight.*

Etherige, A., Who. Grocer.  
 Tuller & Carpenter, Who. Grocers.  
 Selden, G. V., Lumber, etc.

SAGINAW, MICH.

*Hydraulic Passenger*

Bearing, I., Office Bldg. (2)  
 McCormick, J. L., Office Bldg.

*Hydraulic Freight.*

McCormick, J. L., Office Bldg.  
 Sibley & Barringer.

SALT LAKE CITY, UTAH.

*Hydraulic Passenger.*

Ingersoll & Simondi, Apart. House.

*Hand Freight.*

Cunnington & Co.  
 Haines, E. F., Store.  
 Harris Furniture Co.  
 Lawrence, H. W. (2)  
 Snyder, J. J., Store. (2)

SAN ANTONIO, TEX.

*Hand Freight.*

Rampmann, T. H. (2)

SANDY HILL, N. Y.

*Geared Freight.*

Allen Bros., Paper Mills.

SANITARIA SPRINGS, N. Y.

*Steel Screw Passenger*

Kilmer, S. A., Sanitarium.

SARATOGA, N. Y.

*Hydraulic Passenger.*

Strong, S. S., & L. E., Medical Institute.

*Hand Freight.*

Blodgett, H., Residence.  
 Clapp, B. W.  
 Clark, E. C., Residence.  
 Lathrop, H. M., Residence.

SAUGERTIES, N. Y.

*Steel Screw Freight.*

Sheffield, J. B., & Son, Paper Mill. (2)

SAVANNAH, GA.

*Steel Screw Passenger.*

Odd Fellows Hall.  
 Weed Building.

SCHENECTADY, N. Y.

*Steel Screw Freight.*

Edison General Electric Light Co.

*Geared Freight.*

Edison General Electric Light Co. (2)

*Hand Freight.*

Close, L. B.

SCRANTON, PA.

*Hydraulic Passenger.*

Connell, Wm., Store Building.  
 Frothingham, A., Arcade. (2)  
 Goldsmith Bros., & Co.  
 Scranton, Jos. A., Office Building.  
 Williams, W. R., Store Building.

*Hydraulic Freight.*

Connell, Wm., Store Building.  
 Matthews Bros., Drugs.

*Geared Freight.*  
Peoples' Street Railway Co.  
Robinson, M., Brewery.  
*Sidewalk Elevator.*  
Rienhart, W. H., Produce.

SENECA FALLS, N. Y.  
*Steel Screw Freight.*  
Phillips, S. L., Mfg. Building.

SHELDRAKE, N. Y.  
*Hydraulic Passenger.*  
Cayuga Lake Hotel.

SHORTSVILLE, N. Y.  
*Geared Freight.*  
Empire Drill Co. (2)  
Starr Paper Co. (2)

SYDNEY, AUSTRALIA.  
*Steel Screw Freight.*  
Hudson Bros., & Co. (4)

SIOUX CITY, IA.  
*Hydraulic Passenger.*  
Bay State Block.  
Boston Block.  
Massachusetts Block. (2)  
Merchants' Club House.  
Plymouth Block.  
*Hydraulic Freight.*  
Boston Block.  
Lexington Block.  
Massachusetts Block.  
Plymouth Block.  
*Hydraulic Direct Lift.*  
Massachusetts Block.

SKANEATELES, N. Y.  
*Geared Freight.*  
Skaneateles Paper Co.

SODUS, N. Y.  
*Hand Freight.*  
Williams, A. B., Produce.

SOHO, N. J.  
*Geared Freight.*  
Worthen & Aldrich, Factory Bldg.

SOMERVILLE, MASS.  
*Hydraulic Freight.*  
North Provision & Packing Co.  
Squires, J. P., & Co., Packers.  
*Steel Screw Freight.*  
North Provision & Packing Co.  
*Geared Freight.*  
North Provision & Packing Co. (6)

SO, NORWALK, CT.  
*Steel Screw Freight.*  
Roth & Goldsmith, Corset Mfrs. (3)

SPRINGFIELD, MASS.  
*Hydraulic Passenger.*  
Abbe, James T., Office Bldg.  
Forbes & Wallace, Dry Goods. (2)  
Hotel Gilmore.  
Mass. Mutual Life Ins. Co., Office Bldg.  
Metcalf & Luther, Furniture  
Olmstead & Kirkham, Office Building.  
*Hydraulic Freight.*  
Forbes & Wallace, Dry Goods. (2)  
Mayo, A. N. & Co., Rags.  
Swift, G. F., & E. C.  
Walker, T. M., & Co., Paints and Oils  
*Steel Screw Freight.*  
Morgan Envelope Co. (4)  
Swift Dressed Beef Co. (2)  
*Geared Freight.*  
Morgan, E., Envelope Mfr.  
*Hydraulic Direct Lift.*  
Forbes & Wallace, Dry Goods.

SPRING GROVE, PA.  
*Geared Freight.*  
Spring Grove Paper Co.

SPRINGVILLE, VT.  
*Hand Freight.*  
Raynolds, H. T., & Co., Store.

ST. CATHERINES, ONT.  
*Geared Freight.*  
Collinson, Burch & Co., Mfrs. of Knives.

ST. JOSEPH, MICH.  
*Hand Freight.*  
U. S. Light House Depot.

ST. JOSEPH, MO.  
*Steel Screw Freight.*  
St. Joseph Ice and Cold Storage Co. (2)  
Wood Mfg. Co., Mfg. Bldg.  
Wyeth Hardware & Mfg. Co.  
*Hand Freight.*  
St. Joseph Ice and Cold Storage Co.

ST. LOUIS, MO.  
*Hydraulic Passenger.*  
Barnum Hotel.  
Farner Furniture Co., Store Building.  
Hagen Opera House.  
Hodson, T., Dry Goods.  
Hotel Biers.  
Penny & Gentle, Dry Goods.  
Rethwilm, F. W., Tailor.  
Roos, L., Furrier.  
Sisters' Hospital.  
Timmerman, Office Building.  
*Hydraulic Freight.*  
Hilger Hardware Co.  
Kafferstein & Co.  
Laclede Gas Light Co.  
Neidringhaus, Chas., Stoves and Tinware.

O'Connor & Harder, Stoves and Tinware.  
Schwerdtman & Co., Toys.  
Western Stove Co.

*Electric Screw Freight.*

Drew, F. A., Glass Factory. (2)

*Steel Screw Freight.*

Brecht Butcher Supply Co.  
Cupples Real Estate Co.  
Dehner & Wuerpel Mill Bldg. Co. (3)  
Eads Building. (5)  
Fink & Nasse Grocery Co.  
Green & Erskine, Office Bldg. (Pass. Car.)  
Guernsey Furniture Co.  
Heckle Hardware Co.  
Lambert Pharmacal Co.  
Leshen, A., & Sons, Rope Co.  
Leschus & Son.  
Levison & Blythe, Stationers.  
Marietta Real Estate Co.  
Pacific Express Co.  
Prufrock, W., Mattress Mfr.  
Ringin Stove Co.  
Walcke & Co., Soap Manfrs.

*Geared Freight.*

Adams Express Co.  
Armour & Co., Dressed Beef. (2)  
Barnard, G. D., & Co., Printers.  
Becktold & Co., Printers. (2)  
Chouteau Mfg. Co.  
Cox & Gordon, Pork Packers.  
Eads' Building. (2)  
Gast, A., & Co., Printers.  
Gates & Co., Wire Works.  
Globe Shot Co.  
Herf & Frericht, Chemical Works.  
Kingman & Co., Agricultural Imp'ts.  
Koenig, Wm., Agricultural Imp'ts.  
Ludlow, Saylor, Wire Works.  
Morris, Butt & Co., Pork Packers.  
Nedderhut, A., Pork Packer.  
Osborne, D. M., & Co., Agl. Imp'ts.

Sessinghaus, S. S., Flour Miller.  
Spring Printing Co.  
St. Louis Wire Nail Co. (2)  
Strauss Saddlery Co.

*Hand Freight.*

Beaumont Medical College.  
Eads' Building. (2)  
Koenig, Wm., Agrl. Imp'ts.  
Sisters' Hospital.

*Hydraulic Direct Lift.*

Harris, I., & Co., Who. Clothing.

SUSPENSION BRIDGE, N. Y.

*Hydraulic Passenger.*

Falls Park to Rapids. (4)  
Mineral Springs Hotel.

*Hydraulic Freight.*

Van Horn, Willis, Storage Warehouse.  
*Hand Freight.*  
Van Horn, Willis, Storage Warehouse.

SYRACUSE, N. Y.

*Hydraulic Passenger.*

Bastable Office Building. (2)  
Blair, C. C., Apartment House.  
Burns Hotel.  
Congress Hall.  
Dey Bros. & Co., Dry Goods. (2)  
Durstan, J. T., Apartment House.  
Ginty, J. B., & Son, Com. Bldg.  
Globe Hotel.  
Graff, A. A., & Co., Furniture.  
Hayden, S. C., & Co., Furniture. (2)  
Kent & Miller.  
Kirk, W. B., Office Building. (2)  
Kline, E. J., Office Building.  
Larned, S. B., Office Building.  
Lynch, P., Office Building.  
McCarthy, D., & Co., Dry Goods.  
McLennen, P. B., Apartment House.  
Nottingham Bros., Office Building.

O'Brien & Hoolihan, Apartment House.  
Old Ladies' Home.  
Opera House, Office Building.  
Rosenbloom, S., Store Building.  
Syracuse Athletic Club.  
Syracuse Sav. Bank, Office Building.  
Vanderbilt House.  
Walrath & Girvan, Furniture.  
Weiting, J. M., Office Building.  
White Memorial Building, Offices.  
Yates Hotel.

*Hydraulic Freight.*

Amos, Jacob, Commercial Bldg.  
Ginty, J. B., & Son, Com. Bldg.  
Keiffer Bros., Hardware.  
Kennedy, D. M., Mfg. Building. (3)  
Kennedy & Spaulding, Hardware.  
Kirk, Wm. B., Mfg. Bldg.  
Nottingham Bros., Office Bldg.  
Rauch, M., Furniture.  
Salmon, D. B., Boots and Shoes.  
Snow, C. W., & Co., Who. Drugs.  
Yates Estate, Hotel Building.

*Steel Screw Freight.*

Cook, C., Commercial Bldg.  
Hoyt Estate, Factory Building.  
Mason, D., & Co., Publishers.  
Mowry & Barnes, Packers.  
Peters, C. A., Mfg. Building.  
Stearns, E. C. & Co. Bicycles.  
Sanderson Bros. Steel Co.  
Young, Geo. C. & Bro.

*Geared Freight.*

Bradley & Co., Carriage Mfrs. (2)  
Eager, J. W., Hardware.  
Greenway Commercial Building.  
Moyer, H. A., Carriage Mfr.  
Phelps Estate, Factory Bldg.  
Sanderson Bros., Steel Co.  
Short, O., Carriages.  
Sterns, E. C., & Co., Foundry. (2)



Syracuse Chilled Plow Co. (2)  
Syracuse Malleable Iron Works.  
Syracuse Screw Co. (2)  
The Curtis Mfg. Co.  
Tuerk Water Meter Co.  
Whitman & Barnes Mfg. Co.

*Hand Freight.*

Amos Bros., Commercial Bldg. (3)  
Danziger Bros., Clothing.  
Eager, J. W., Factory Building.  
Featherly, F. M., Crockery.  
Hier, G. P., Tobacco.  
Howard & Jennings.  
Moore, J. & Co., Opera House.  
Ross, W. L., & Co.  
Sanderson Bros. Steel Co.  
Surbeck, J. C., & J.  
Syracuse Screw Co.  
Yates Estate, Hotel Building.

*Sidewalk Elevator.*

Crouse, E., Stable.

*Hydraulic Direct Lift.*

Bastable Office Building.  
Ginty, J. B., & Son, Com. Bldg.  
Kirk, W. B., Office Building. (3)  
Mann, J. H., & Co., Grocers.  
McCarthy, D., & Son, Who. Dry Goods.  
Opera House.  
Yates Estate, Hotel Building.

TACOMA, WASH.

*Hydraulic Passenger.*

National Bank of Commerce, Office Bldg.

TICONDEROGA, N. Y.

*Steel Screw Freight.*

Lake George Pulp & Paper Co. (2)

TIDIOUTE, PA.

*Geared Freight.*

Tidioute Chair Co.

TOLEDO, O.

*Geared Freight.*

Toledo Malleable Iron Co.

TOMPKINS COVE, N. Y.

*Steel Screw Freight.*

Tompkins Cove Lime Co. (2)

TOPEKA, KAN.

*Hydraulic Passenger.*

Stevenson & Peckham, Dry Goods.

TORONTO, ONT.

*Electric Screw Passenger.*

Edison General Electric Co. (3)

TORRINGTON, CT.

*Geared Freight.*

Union Hardware Co.

TRAVERSE CITY, MICH.

Keeney, N. B., & Son, Beans.

TROY, N. Y.

*Hydraulic Passenger.*

Fogarty, Cornelius, Dry Goods.  
Saunders, J. S., Hotel.  
Troy House.

Wotkyns, Tom. S., Residence.

*Hydraulic Freight.*

Darling, H. H. Bros. & Co., Who. Grocers.

Dickson, H. S., Store Bldg.  
Hartwell & Bainbridge Co., Furniture.  
Smith, Geo. D., Commercial Bldg.

*Hydraulic Direct Lift.*

McLeod, H. S., Store Bldg.  
Mertens & Phalen, Store Bldg. (Pass.)  
Miller, Hall & Hartwell, Factory Bldg.

*Steel Screw Freight.*

Miller, Hall & Hartwell, Factory Bldg. (4)  
Quandt Brewing Co.

*Geared Freight.*

Cleminshaw, C., Soda Water.

*Hand Freight.*

Bishop, C. B., Residence.  
Brown, C. A., Warehouse.  
Cartie, E., Teas, etc.  
Cluett, Geo. B., Bros. & Co., Collars and Cuffs.  
Martin, E. W., & Son, Stable Building.

TROY, PA.

*Hand Freight.*

Gernet, H. C., Produce.  
Pomeroy Bros., Bankers. (2)

UNION HILL, N. J.

*Geared Freight.*

Simon, R. & H., Silk Mill.

URBANA, O.

*Hydraulic Freight.*

Mosgrove, J. M., Com. Building.

UTICA, N. Y.

*Hydraulic Passenger.*

Butterfield House.  
Embley, W., Store Building.

Faxton Hospital.  
Genesee Flats.  
Mather, J., Arcade Building.  
Roberts, J. A., Dry Goods. (2)  
St. James Hotel.  
Winston, D. D., Office Bldg.

*Hydraulic Freight.*

Globe Woolen Co.  
Heiber, J. C., & Co., Dry Goods. (2)  
Johnson & Murray, Who. Grocers.  
McAdams, Q., & Co., Dry Goods.  
Mosher Bros. (2)  
Reynolds' Estate.  
Sheehan, J. H., & Co., Drugs.  
Tallman & Hurd.  
Thomas, T. R., & Co., Produce.  
Warnick & Brown, Store Building.

*Steel Screw Freight.*

Cooper, H. H., & Co., Clothing Mfrs.  
Cloys, J. N., & Co., Shoe Mfrs.  
DeLong, M. B., Furniture. (2)  
Griffith, M. H., Clothing.  
Griffin & Hoxie, Who. Grocers.  
Holbrook, H. J., & Co., Shoe Mfrs.  
Nelson, J.  
Reynolds Bros., Shoe Factory. (2)  
Roberts, Butler & Co.  
Utica Cold Storage & Warehouse Co.  
Utica Daily Press.  
Utica Knitting Co.  
Utica Steam Gauge Co.

*Gear'd Freight.*

Head, Winston & Co., Who. Grocers.  
Lux, H., Sons, Wholesale Meats.  
Russell, Wheeler, Son & Co, Foundry. (2)  
Utica Burial Case Co

Warnick & Brown, Tobacco.  
Williams, James, Factory Building.

*Hand Freight.*

American Express, Stables.  
Boutillier, E., & Co., Rags.  
Butler, J. M., Store Bldg  
Geo. A. Clark, Factory Building.  
Genesee Flats. (10)  
Hieber, J. C., & Co.  
Metropolitan Hotel.  
Mosher Bros., Com. Building. (3)  
Saltzman & Son, Bakery.  
Sayre, T. S., Belting, etc.  
Schuyler, W. H., Livery.  
Simmons, A. J., Residence.  
Spencer, T. W.  
St. Elizabeth's Hospital and Home.  
St. Luke's Home.  
Utica Burial Case Co.  
Warnick & Brown, Tobacco.

*Hydraulic Direct Lift.*

Wheeler, R., & Son, Foundry.

WADDINGTON, N. Y.

*Sidewalk Elevator.*

Crapser Bros., Produce.

WATKINS, N. Y.

*Hydraulic Passenger.*

Glen Springs Sanitarium.

WARSAW, N. Y.

*Hydraulic Passenger.*

Warsaw Sanitarium.

WASHINGTON, D. C.

*Hydraulic Passenger.*

Prahl, W. E., Hotel Arno  
Washington Post Building.

*Hydraulic Freight.*

Moses, W. B., & Son, Furniture.

*Steel Screw Freight.*

Hocks, W. H., Carpets.  
Jackson, E. E., & Co, Sash and Door F'ct'y.

*Gear'd Freight.*

Barbour & Ross, Warehouse.

WATERBURY, CT.

*Steel Screw Freight.*

Scoville Mfg. Co., Brass Goods.

*Gear'd Freight.*

Scoville Mfg. Co., Brass Goods. (2)

*Hand Freight.*

Goss, C. P., Residence.

WATERFORD, N. Y.

*Gear'd Freight.*

Waterford Knitting Co.

WATERLOO, N. Y.

*Steel Screw Freight.*

Waterloo Woolen Co.

*Gear'd Freight.*

Waterloo Wagon Co.

WATERTOWN, N. Y.

*Hydraulic Passenger.*

Bushnell, A., Dry Goods.  
George, S. L., Office Bldg.  
Smith, W. H., Apartment House  
Taggart, Brothers, Office Bldg.

WATERVILLE, N. Y.

*Steel Screw Freight.*

Buell, C., & Son, Boots and Shoes.

WAVERLY, N. Y.

*Hydraulic Freight.*

Barnum & Personious, Grain.  
Mills & O'Brian, Bottlers.  
Merriam, H. G., Who. Hardware.  
Walker, T. S., & Son, Groceries.

*Hand Freight.*

Kimmell, M.

WELLINGTON, O.

*Hand Freight.*

Vischer, W., Pianos and Organs. (2)

WEST FARMS, N. Y.

*Gear Freight.*

Union Railway Co., Barn

WESTERLY, R. I.

*Hydraulic Direct Lift.*

Clark, Wm. Co., Thread Works.

WEST TROY, N. Y.

*Gear Freight.*

Covert Mfg. Co., Harness Trimmings.

WEST WINSTED, CT.

*Screw Freight.*

Winsted Hosiery Co., Factory Bldg.

*Gear Freight.*

Richards, T. C., Hardware Co.

WHITESBORO, N. Y.

*Steel Screw Freight.*

Ablett, Robert, Knitting Mill.

WILLIAMSPORT, PA.

*Steel Screw Passenger.*

Stephens & Crounse, Store Bldg.

*Gear Freight.*

Luppert & Kline, Furniture. (2)

*Hand Freight.*

Rochester Brewing Co.

*Sidewalk Elevator.*

Y. M. C. A.

WILLIMANTIC, CT.

*Hydraulic Passenger.*

Windham Hotel.

WILKESBARRE, PA.

*Hydraulic Passenger.*

Long, Jonas, Son, Dry Goods. (2)

Wells, Edward, Office Bldg.

Wyoming Valley Hotel.

*Gear Freight.*

Hazard Mfg. Co., Wire Rope.

*Hydraulic Direct Lift.*

Long, Jonas, Sons, Dry Goods. (2)

WINDSOR, ONT.

*Hydraulic Passenger.*

Bartlett & McDonald, Dry Goods.

WINSTED, CT.

*Steel Screw Freight.*

New England Pin Co.

Strong Mfg. Co.

Winsted Hosiery Co. (2)

WOODBIDGE, N. J.

*Steel Screw Freight.*

Staten Island Terra Cotta Lumber Co.

WOONSOCKET, R. I.

*Steel Screw Freight.*

Woonsocket Rubber Co.

WORCESTER, MASS.

*Hydraulic Passenger.*

Barnard, Sumner & Co.

Davis, Dr. Wesley, Hotel.

Gorham, C. L., & Co., Pianos.

Hotel Brunswick.

Sampson Apartment House.

Taylor, R. C., Office Building. (2)

*Hydraulic Freight.*

Prentice Brothers, Machinists' Tools.

YORK, PA.

*Hand Freight.*

Dempwolf, J. A., Mill.

Weigle, N.

YORKVILLE, N. Y.

*Hand Freight.*

Cole, J. N., Store Building.

ZANESVILLE, O.

*Gear Freight.*

Am. Encaustic Tiling Co. (2)

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